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Porter

VOL 82 NO. 10

textile bulletin

OCTOBER • 1956

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TRADE MARK REGISTERED

ATTENTION WEAVERS

Why tolerate heavy losses from oil spoiled goods when you can buy NON-FLUID OIL—a lubricant made to stay *in* loom bearings and do its job—instead of throwing or spattering.

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Yes, NON-FLUID OIL increases production because it minimizes damage to goods caused by leaking and "cam-spatters."

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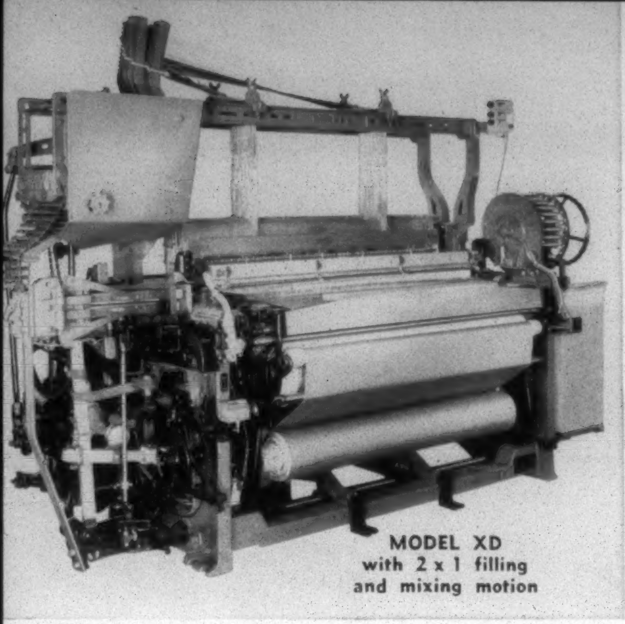
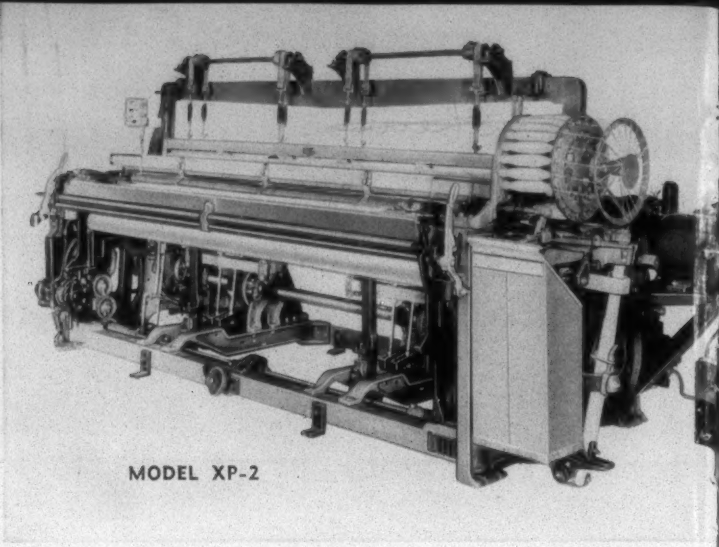
NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.



MODEL XD
with 2 x 1 filling
and mixing motion



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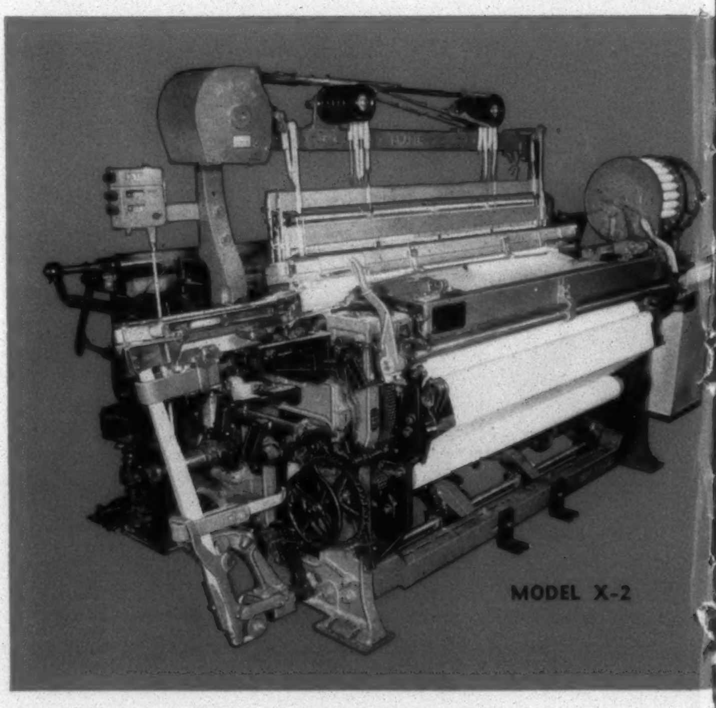
DRAPER LOOMS ARE THE WORLD'S FINEST SINGLE SHUTTLE LOOMS

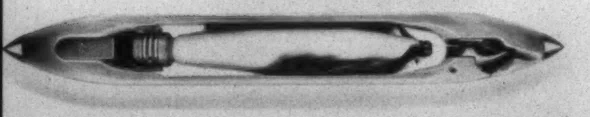
Draper High-Speed Automatic Looms, featuring many new developments, are today's accepted standard for production, economy and versatility in weaving. Available in several models and widths, Draper looms are currently in use in textile mills throughout the world.

Draper looms, accessories and repair parts reduce weaving costs.

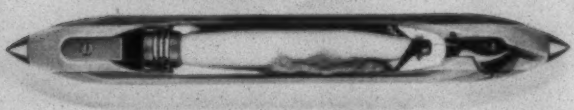


MODEL X-2

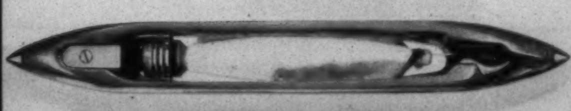
TRU-FLIGHT SHUTTLE



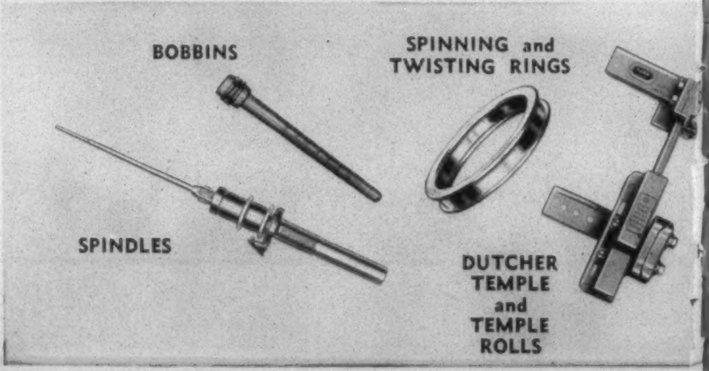
TRU-FORM SHUTTLE



TRU-MOLD SHUTTLE



DRAPER PARTS AND ACCESSORIES FOR BEST PERFORMANCE



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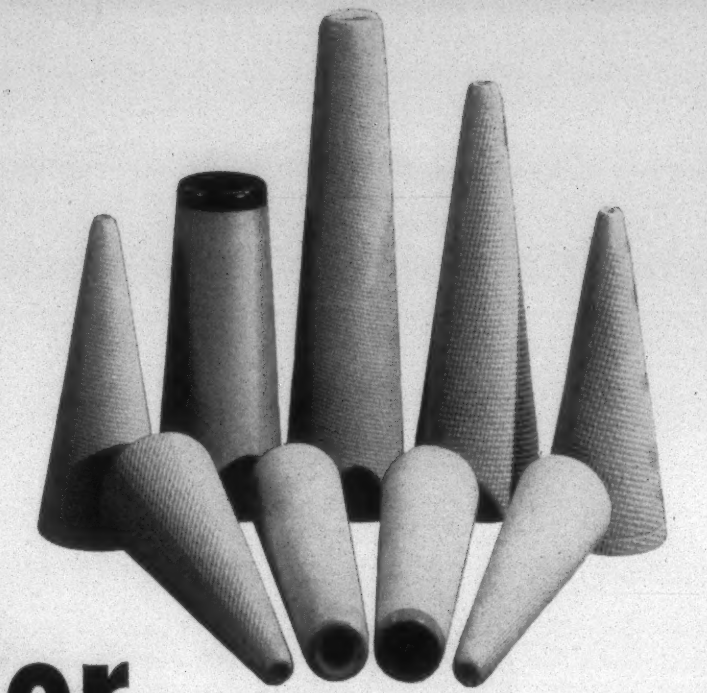
for better fit!



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Precision winding starts with precision made cones. Without precision winding you cannot get the sound yarn package that delivers at even tension and without break. SONOCO cones are made to fit the winding mandrel accurately. This, coupled with special SONOCO process surfaces for every type of winding job, results in a perfect package that insures smooth, even delivery of yarn under high speed working conditions. Cone surfaces include plain, high and low mark, Velvet and Unitex. SONOCO cones are made with notches, scores and in many nose designs. Lacquer tipping, dyed base and tip, striped base and colored paper can be furnished for yarn identification. Consult your SONOCO sales-engineer, or write us direct.

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DEPENDABLE SOURCE OF SUPPLY

Out of Chemstrand research comes a great new advance in filament nylon dyeing:

THE CHEMNYLE* PROCESS

For the first time in nylon history, nylon filament yarn can now be dyed to give both colorfastness and uniformity!

The dyeability of filament nylon yarn has always posed a dilemma. Under conventional dyeing methods, disperse dyes gave nylon good uniformity of dyeing but at the sacrifice of colorfastness. Conversely, the use of many acid and direct dyestuffs gave nylon high fastness properties but at the expense of uniform dyeing. This "either or" dyeability put heavy brakes on the expanding uses of nylon yarn.

Now Chemstrand research has resolved this dilemma with the development of the Chemnyle Process...*a new dyeing technique that gives continuous filament nylon excellent color uniformity and colorfastness simultaneously . . . a combination previously unobtainable.* Even when washed at temperatures of 160 degrees F. and higher, fabrics dyed by the Chemnyle Process show outstanding resistance to color loss . . . while improvements in lightfastness are also very substantial.

With the Chemnyle Process, nylon at last achieves a dyeability worthy of its other famed properties of strength, long wear, easy washing, fast drying. With the Chemnyle Process a broad range of end products can now be successfully dyed in fast color...thus opening up great new opportunities for the textile industry.

The Chemnyle Process is readily adaptable to all forms of existing dyeing equipment, is applicable to piece, stock and package dyeing and costs about the same as conventional dyeing processes.

For full information regarding licensing procedures, The Chemstrand Corporation invites mills and dyehouses to contact The Chemstrand Nylon Sales Dept. at 350 Fifth Ave., N. Y. 1.

CHEMSTRAND® NYLON

CHEMSTRAND NYLON

*Patent applied for.

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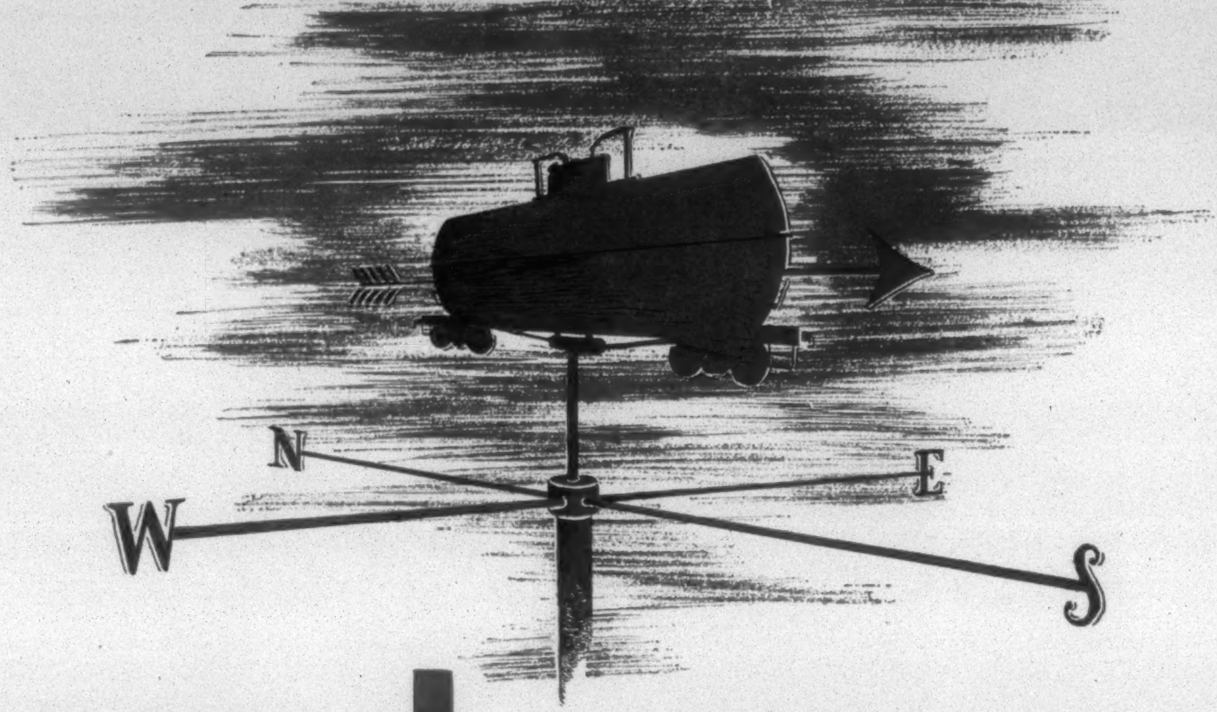
the growing textile industry!



CAUSTIC SODA

Liquid 73%
Liquid 50%, Regular, Rayon and Low — Chloride Grade
Flake, Solid and Ground, 76% Na_2O

CAUSTIC POTASH

45 and 50% Liquid — Flake and Solid

Strategically located in South Charleston, W. Va. . . . with one of the largest single electrolytic caustic-chlorine operations in the world . . . Westvaco is well-situated to serve your needs. Whether your mill is in New England or the South, you can depend on uniform quality and prompt deliveries, *on schedule*. There's a wide choice of packaging, too, to minimize your warehousing and inventory problems, save you time and money.

Like so many other outstanding producers of textile fibers and fabrics, you will quickly learn to rely on Westvaco's expanding facilities and its background of more than a half century of service. Why not start now?

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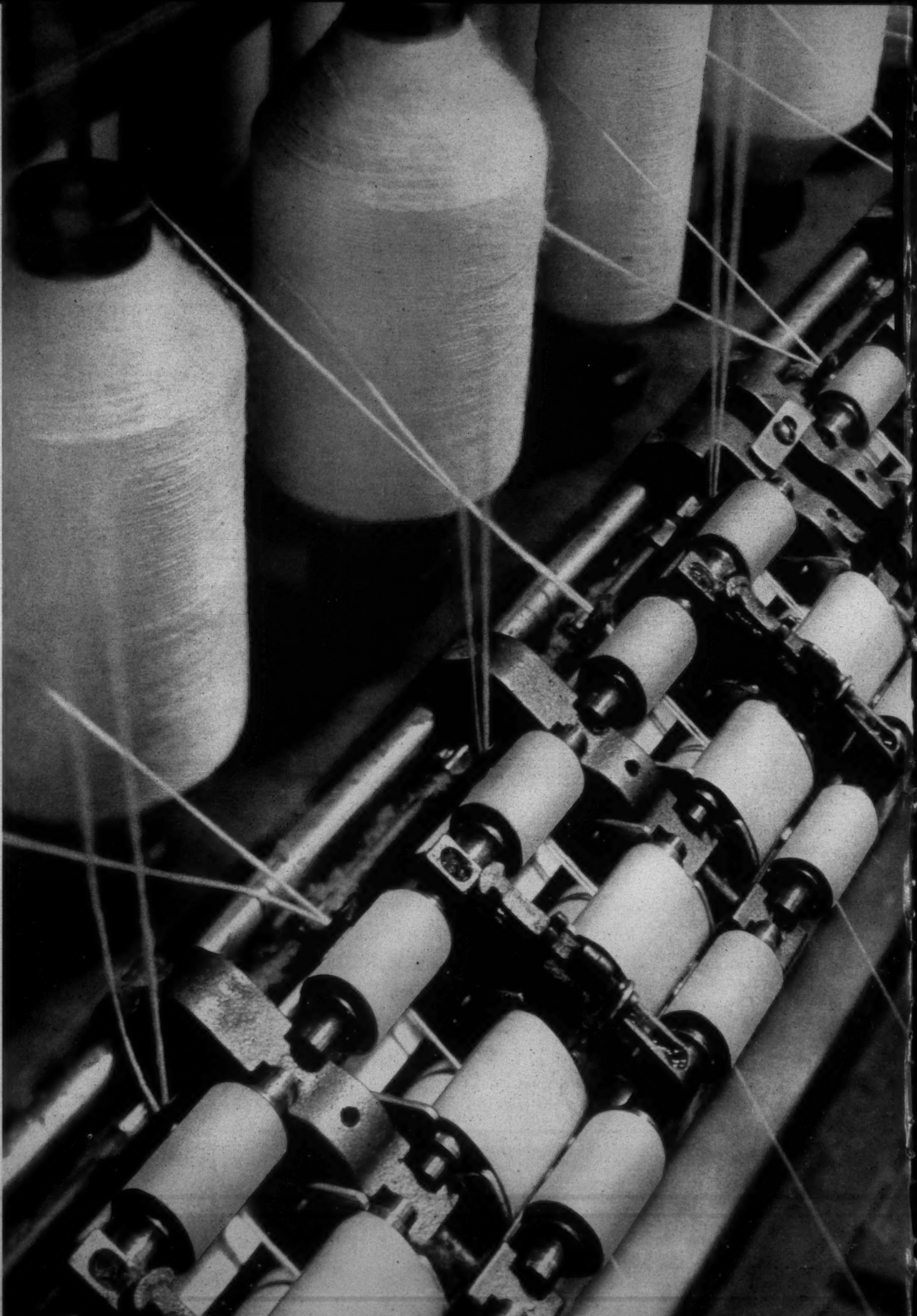


Check "dog day" lap-ups with DAYCO all weather cots

Eliminate the excessive, annoying lap-ups that always seem to bog production during hot summer "dog days." Install Dayco's amazing *all weather* cots.

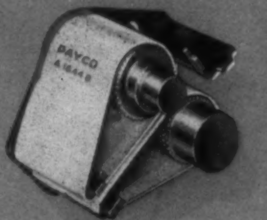
One mill using Dayco Cots actually reduced lap-ups four to one over other cots in tests covering a period of the hottest, muggiest weather in the last few years.

Dayco Cots never vary in their physical properties, never become sticky, gummy. Compounded to resist the heat and humidity inescapable in many mills, Dayco Cots contain no large, rough fillers. They never develop a tackiness to retard and break the end when both heat and humidity reach extremes.

Even when it rains Dayco Cots stay dry, will not become slick, so they maintain their same smooth drafting qualities—give you more uniform, higher quality yarn.

Test Dayco's quality producing, cost reducing spinning combination—Dayco Cots and Dayco Long Draft Aprons. For information contact your Dayton Representative, or write The Dayton Rubber Company, Textile Div., 401 S. C. National Bank Bldg., Greenville, S. C.

Dayco Long Draft Aprons give up to 10% more uniform yarn. Precision ground for uniformity, they give constant, unvarying control in the drafting area. Unaffected by temperature or humidity Dayco Aprons won't stretch or take a permanent set, so Monday morning starts are positive, without hesitation. Available for both single and double apron systems.



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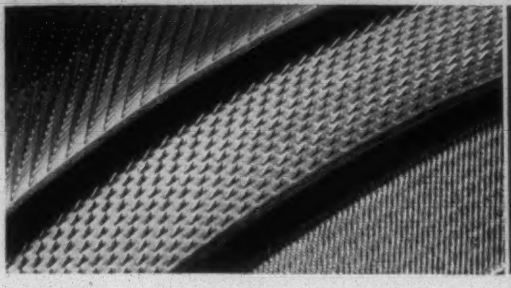
51 Dayton Rubber

YEARS OF PROGRESS

Dayco and Dayton Thorobred Textile Products for Better Spinning and Weaving



Ashworth Tips ON CARDING

No. 34 in a Series

MORE ABOUT THE LICKERIN

The importance of the lickerin assembly in its relation to the quality of carding cannot be overemphasized. From time to time, when mentioning the control of neps, the reduction of card sliver variation, raised or blistered fillets, and in matter pertaining to the feed end of the card, the lickerin and its adjacent parts have assumed a prominent place as factors to be considered when taking corrective measures.

Uniform separation of fibres from the fringe of picker lap is not only desirable but essential. A lickerin wound eight starts, one inch lead, is the best medium in present day use to achieve this, since there is a uniform distribution of points over the roll's surface. The six start (six strands per inch) lickerin offers equally uniform distribution but with fewer points per square inch. Those wound single strand, eight threads per inch, are often found with teeth in clusters and sometimes arranged in a definite pattern; neither condition being conducive to the optimum in fibre separation and both tending to contribute to nep formation and variation.

Card manufacturers have long since recognized the importance of the one inch lead when grooving lickerins — whether of the six or eight start type. Repair shops who make every possible effort to perpetuate the existence of these grooves and are not given to turning them off and substituting a single strand as an expedient are acting in the best interest of the mill.

Tips Nos. 5 and 7 mention that lickerins should be full size. The lickerin screen of every card was designed to conform to the specified diameter of the lickerin. When the latter is undersize it not only lacks concentricity with the screen but, as many card grinders have found, often requires filling of the shrouds in order to be set with the proper gauge to the cylinder. The reputable repair shop, by inserting wire of a height calculated to bring about the correct diameter of the lickerin over the points, helps in maintaining the proper relationship between the roll and the screen.

We believe that one highly important requisite for good carding is a sharp, full size lickerin, with the original grooving maintained with respect to number of starts and pitch, and the entire assembly, including mote knives, screen and feed plate nose in good condition and properly set. The mill should settle for nothing less.

ASHWORTH BROS., INC.

American Card Clothing Co. (Woolen Division)

Fall River*†‡ Worcester‡ Philadelphia*†‡ Atlanta†‡
Greenville*†‡ Charlotte†‡ Dallas†‡ (Textile Supply Co.)
E. G. Paules, Representative — Los Angeles, Calif.
*Factory †Repair Shop ‡Distributing Point
3 Factories • 6 Repair Shops • 7 Distributing Points

PRODUCTS AND SERVICES

Clothing for Cotton, Wool, Worsted, Silk, Synthetic Fibre and Asbestos cards and for All Types of Napping Machinery. Brusher Clothing and Card Clothing for Special Purposes. Lickerin Wire and Garnet Wire. Sole Distributors for Platt's Metallic Wire. Lickerins and Topflats Reclothed.

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3 FACTORIES • • • 6 REPAIR SHOPS • • • 7 DISTRIBUTING POINTS

"Dress-up Time"

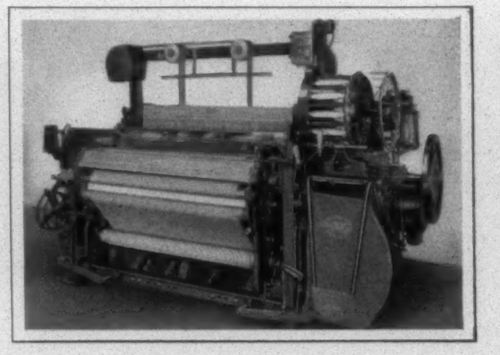
for all modern families

. . . and for all modern weaverooms, too!

Good clothes . . . and enough of them . . . are a certain measure of an individual's (or a family's) self-respect, success, and position in life.

You can say much the same thing about weaverooms. Modern looms . . . and enough of them . . . are the *exact* measure of a mill's success, both now and in the future. And what the "well-dressed weaveroom" is wearing nowadays are looms like C & K's new Multi-Purpose models . . . the *only* looms that can be converted overnight from plain to fancy goods and back again, at will. Also, there are C & K's W3 and W3A Looms with the exclusive *Select-A-Pic* feature that permits the automatic weaving of many pick-and-pick fabrics that cannot be woven automatically by any other method. Not to mention C & K's fabulous jacquard mechanisms, new narrow-fabric looms, C looms, S looms and other modern weaving equipment.

It's good business to "dress up" your mill's weaverooms right now with new and modern C & K Looms that will put you at the head of the profit parade *and keep you there.* If you saw C & K's new **M-P** Looms that stole the show at Greenville . . . *then see C & K today.*



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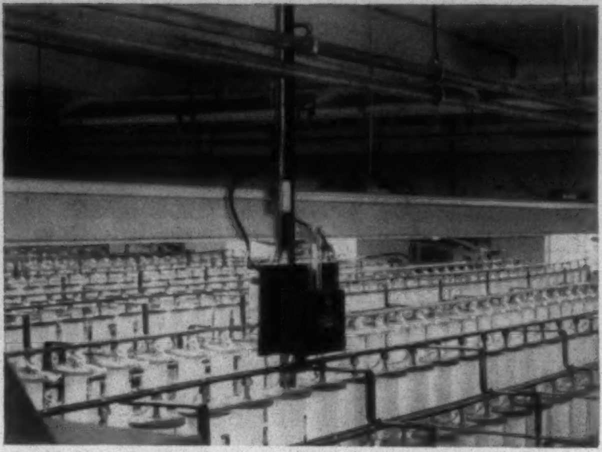
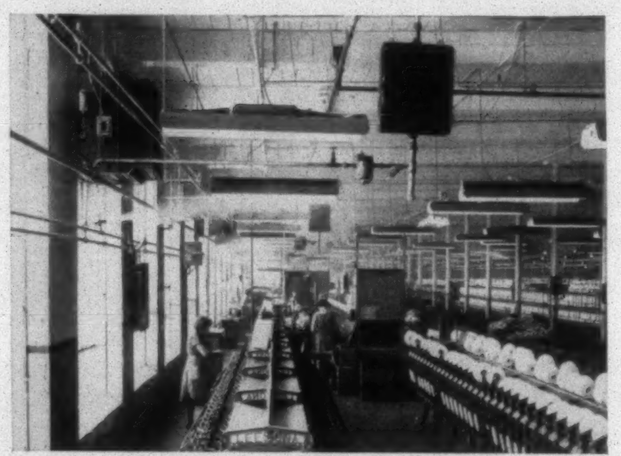


AMCO Humidification System installed at Caron Spinning Company, Robesonia, Pa. The highly sensitive AMCO Cyclestat Control holds humidity within narrow limits.

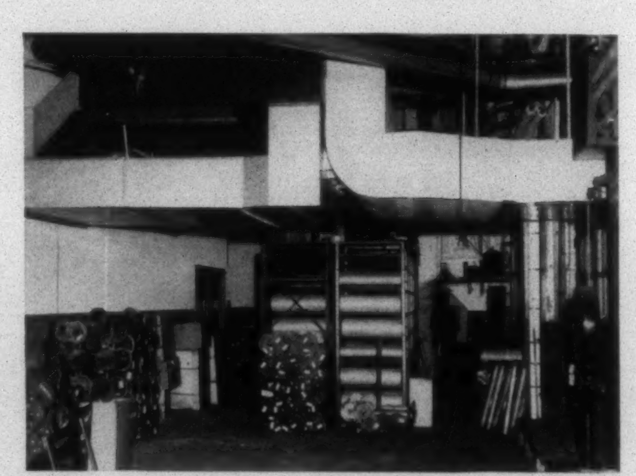


AMCO Evaporative Cooling System in Texas Textile Mills, McKinney, Texas. Note window units which control mixture of fresh and recirculated air.

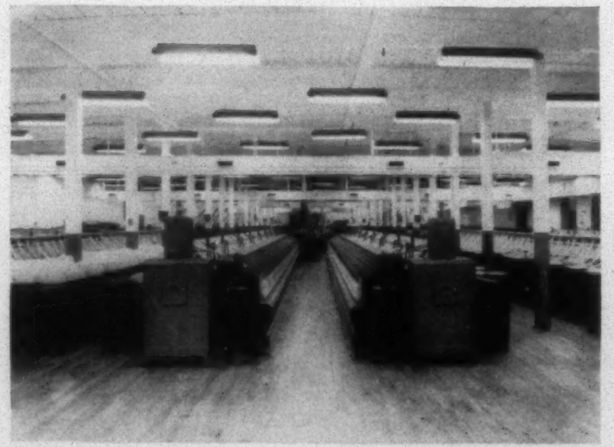
There's an AMCO AIR CONDITIONING SYSTEM designed for YOU!

When you think of air conditioning, remember that AMCO offers systems and equipment for every manufacturing requirement and every climatic condition. There are four different types of AMCO systems, alone or in combination: humidification, evaporative cooling, unit dry-duct, or central station air conditioning. And because AMCO engineers have these four basic systems — plus all associated equipment and controls — they are able to offer you unbiased advice on the *best* system for your particular need.

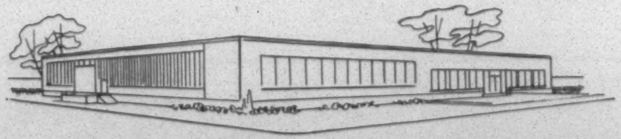
If you want the facts about textile mill air conditioning, with the advantages and limitations of each system detailed, as well as answers to such questions as cost, adaptability, capacity, maintenance and operating expense, write for AMCO's booklet, "AIR CONDITIONING for the TEXTILE INDUSTRY". Or better still, ask AMCO to recommend, without obligation, the system best suited to your mill.



AMCO Unit Dry-Duct System at The Windsor Manufacturing Company, Philadelphia, Pa. The entire unit is installed overhead out of the way.



AMCO Central Station Air Conditioning in the Roving Dept., Highland Park Mills, Charlotte, N. C. This is AMCO's highly efficient split-system.



New Cleveland-Rowan Plant of the American Moistening Company. This modern plant is located at Cleveland, N. C. for the fabrication of duct work and sheet metal products.

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AIR CONDITIONING SYSTEMS since 1888

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Now from National three widely useful stabilized diazonium salts

NATIONAL® BLUE 3BVS SALT

Produces reddish-blue shades when coupled with National Naphthols AS-OL, AS-BG, AS-RO, AS-BO and AS-BR; greenish-blue with other naphthols except AS-G which yields a dull orange shade. Full properties and application data are given in our Bulletin 431, available from our nearest office.

NATIONAL BLACK K SALT

Couples with National Naphthols AS-BG, AS-BS and AS-SW to produce a jet black. Yields reddish-black when coupled with other naphthols. Ask our nearest branch office for our shade card (Bulletin #430) giving complete data on properties and procedures for package dyeing, naphtholating and printing.

NATIONAL BLUE 2BS SALT

This salt produces greenish-blue shades when coupled with National Naphthols AS-D, AS-TR Disp. and AS-E; reddish-blue shades with other naphthols except AS-G Disp. which yields a bright yellow. For properties, naphtholating and developing procedures, get our shade card (Bulletin #440) from our branch office nearest you.

Coupled with various National Naphthols these National stabilized diazonium salts all possess very good-to-excellent fastness to light, washing, soda boil and other wet processing. They are applicable by all the dyeing and printing processes generally employed for dyes of this type. Many combinations can be discharged to excellent whites with hydrosulfite discharge pastes.

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2

ANNOUNCING...

The Tennessee Corporation, miners of Sulfur Bearing Ores, announces another Basic Sulfur Textile Chemical, **T C HYDRO** for the Southern textile industry.

SODIUM HYDROSULFITE

T C HYDRO

TENNESSEE CORPORATION

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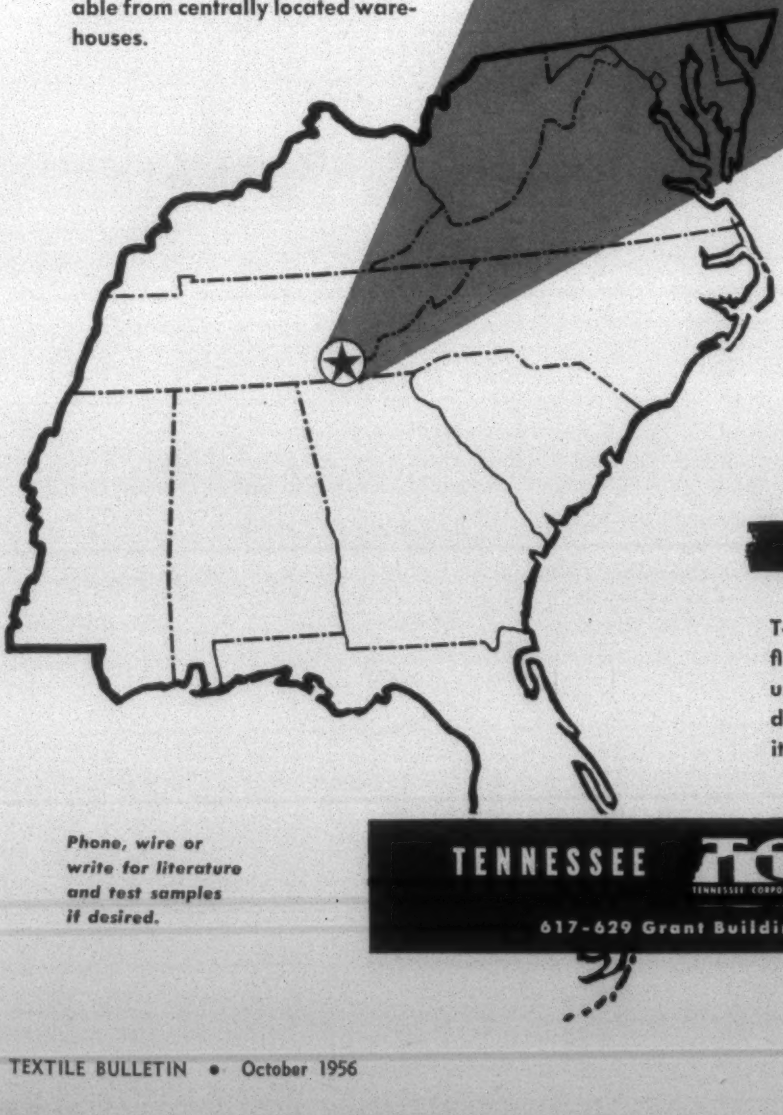
SERVICE

Located in the heart of the Southern textile industry, we are in a position to give over-night truckload service to most Southern textile plants. Small lots available from centrally located warehouses.



DEPENDABILITY

Long a trusted source of Sulfuric Acid, Sulfur Dioxide, Organic Sulfonates and other textile chemicals, we are utilizing our know-how and basic position in sulfur chemistry to produce another quality product for the textile industry.

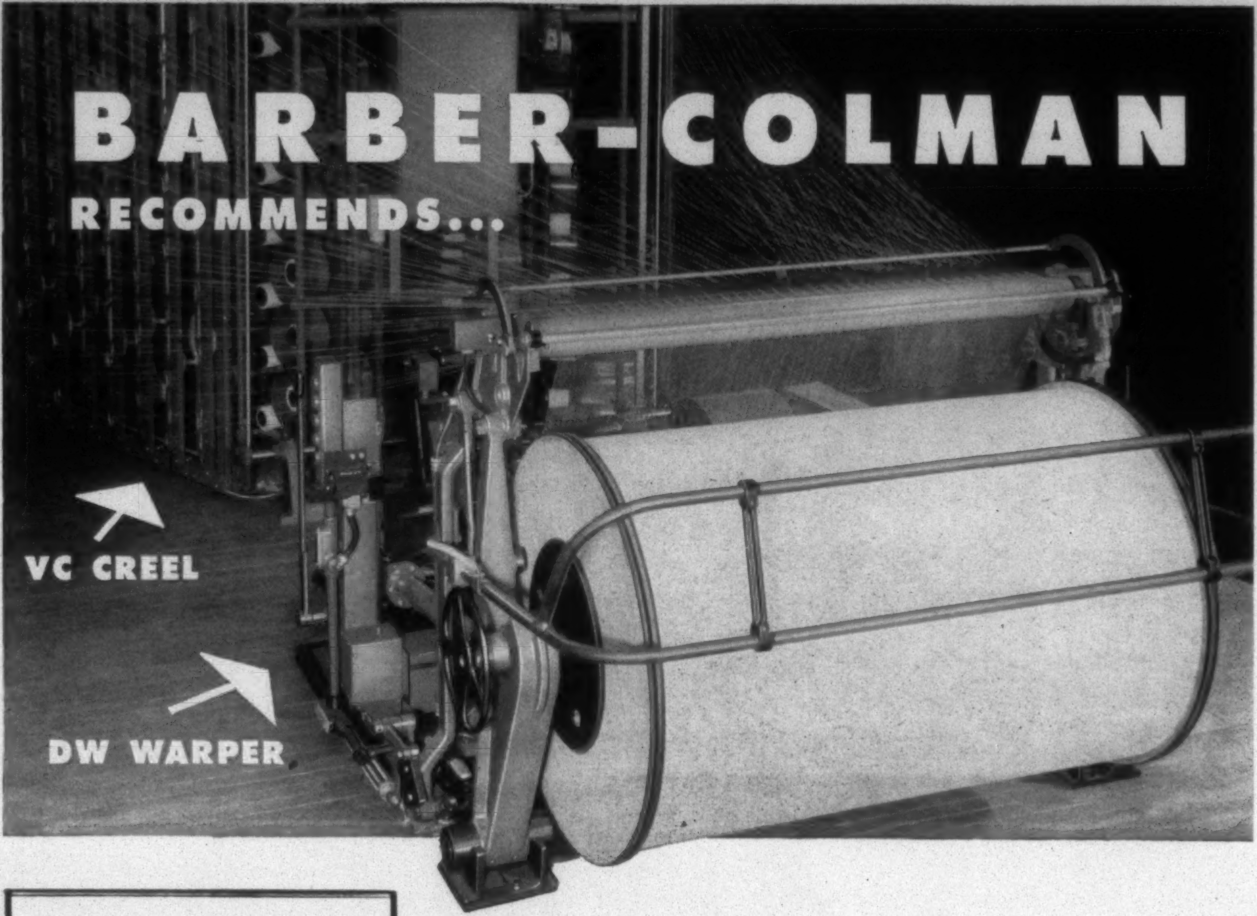
QUALITY

T-C HYDRO is a dry, white, free flowing, crystalline powder of uniform size and structure. It is dust free assuring higher stability and uniformity.

Phone, wire or write for literature and test samples if desired.

TENNESSEE CORPORATION

617-629 Grant Building, Atlanta, Georgia



FEATURES OF THE NEW "DW" WARPER

CAPACITY. The "DW" Super-Speed Warper will wind beams up to 40" head diameter. All types of beams up to this size can be accommodated.

LET-OFF MECHANISM. In order to insure uniform pressure on the driving drum as the beam builds up, a new let-off mechanism has been developed. This permits extremely accurate automatic gaging and maintenance of pressure, and consequent uniformity of the beam.

DOFFING. A power-operated built-in doffing mechanism helps to reduce down time to a minimum and saves effort substantially. Sturdy arms, which support the beam, pivot outward to set the beam on floor or truck as desired.

PUT A NEW "DW" WARPER

IN FRONT OF YOUR PRESENT

"VC" CREEL

It is perfectly possible to do this, and the added advantages of lower cost and greater productivity can make the investment a profitable one. Gains come in several ways — larger beams can be wound, the beams are of greater uniformity throughout, and doffing is much easier. The new "DW" Super-Speed Warper is a little deeper from front to back, since the driving drum, clutch, brake, and motor are now arranged back of, rather than underneath, the beam. With this re-arrangement, valuable improvements have been made in many important elements of the drive and controls. We suggest you discuss the possibilities for *your* mill with your Barber-Colman representative at the next opportunity.

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES

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for vat, sulfur, direct and developed colors

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Peregal ST is THE assistant to use for stripping cotton or rayon yarns, piece goods, raw stock and prints.

Peregal ST forms extremely stable cation-anion complexes with dyestuffs containing sulfo or phenolate groups in aqueous solution. The bond of attraction between these dyes and Peregal ST is so strong that the affinity of the dislodged dye in the stripping bath is permanently shifted away from dyestuff-on-cellulose to dyestuff on Peregal.

In general, Peregal ST can be considered a "liquid fiber" for which dyestuffs have even greater affinity than for cotton or rayon.

Write today for complete technical data on this highly effective and economical stripping aid.

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It's as simple as this...

WHITIN R

In top-flight quality mills, high production mills and specialty mills, on every fiber, Whitin Roving frames are acknowledged leaders.

This distinct mill preference is based on a solid record of unbeatable production, evenness of roving produced, the flexibility and performance of Whitin drafting systems. Advanced in design and having every desirable mechanical improvement, these frames have set new high standards of operation, with lowest costs per pound for direct labor, maintenance and total cost.

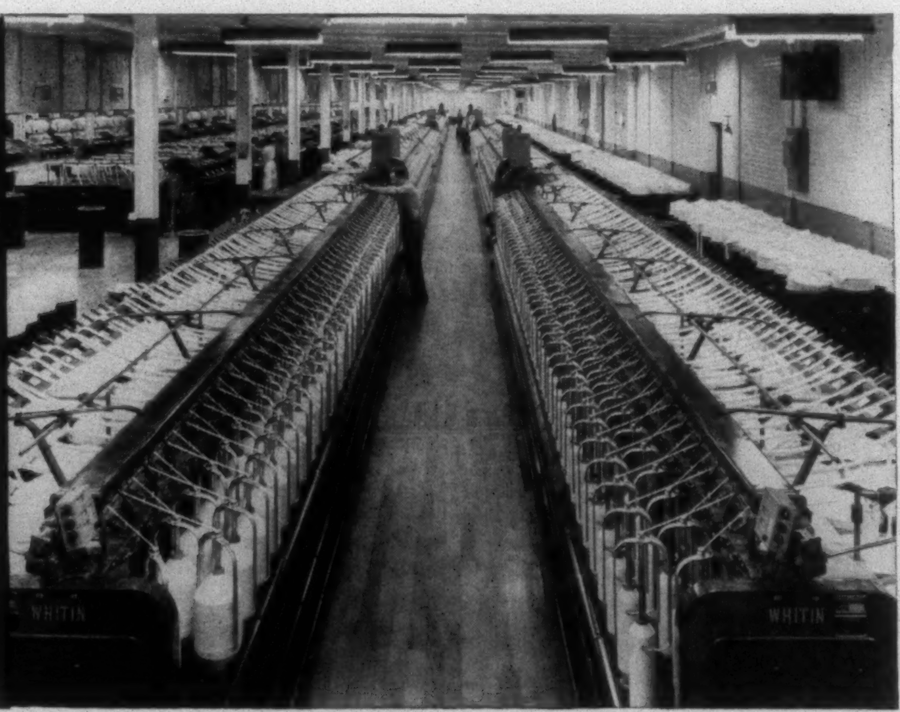
ROVING FRAMES

give you Better Roving at Lower Cost

The data below is an example of the production and cost advantages you can secure with Whitin Roving frames. The figures are based on actual operating conditions in a mill producing 162,000 lbs. per 144 hr. week of 80x80, 39" 4.00 high quality print cloth with 31's warp and 41's filling.

	For 31's Warp	For 41's Filling
Hank Roving	1.00	1.30
Spindle R. P. M.	725	725
Front Roll Speed	178	139
T. Multiplier	1.15	1.30
% Efficiency	88	88
Lbs./Spdle./Hr.	1.10	.660
Lbs./Spdle./144 Hrs.	158.4	95.0
Size of Bobbin	12"x6½"	12"x6½"

	For 31's Warp	For 41's Filling
Wt./Sliver/Bobbin	54 oz.	54 oz.
Spindles per frame	96	96
Spindles Required	1279	
Spindles, 14 frames used	1344	
Fr./Operator	5-5-4	
Cost per lb. for direct labor . . .	**$.00391**	



Photos courtesy of
DUNDEE MILLS, Incorporated
Griffin, Georgia

WHITIN MACHINE WORKS
FOR 125 YEARS
ONE COMPANY WITH ONE PURPOSE
SERVICE TO THE TEXTILE INDUSTRY
1831-1956

For complete information, ask your Whitin representative — or write direct to us.

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

PRECISION
PADDING AND PRINTING

with COLOR by

INDIGOSOL*

Through the modern methods of scientific precision padding and printing, Indigosol insures perfect color reproduction for those pastel shades on cotton, linen, viscose and wool.

Indigosol skillfully produces color at its best . . . colors that are most economical for extreme fastness and light shades, easy to apply, level, stable and readily dissolved.

Spur customers to action at the point of sale.

Get Indigosol . . . and profit!

Our application laboratories are daily solving new, difficult color matching problems through the accuracy of precision padding and printing. Years of experience and research have equipped us to furnish the exact color you require . . . *exactly* – with speed, efficiency, economy. Write us now for full information.

*Reg. U. S. Pat. Off.

The exact color you require...exactly.

CARBIC Color & Chemical Company, Inc.

451-453 Washington St.
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Branches:
Philadelphia, Charlotte,
Providence, Los Angeles,
Hamilton, Ont.

Importer of
the manufactures of
Durand & Huguenin S. A.
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LUSTRE

that *lives*... for the life of the fabric!

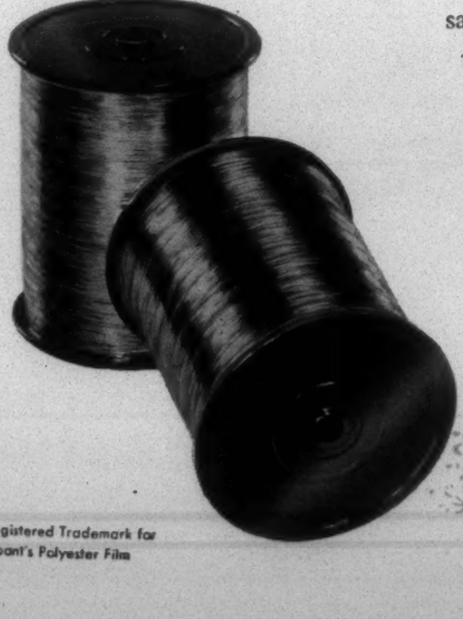
GLITTERING
FAIRTEX®
YARNS
with Metallized Mylar*

FAIRTEX Yarns with Metallized Mylar* never lose their glittering glamour . . . and outlast even the fabric itself!

Specifically developed for use in automotive fabrics, upholstery and drapery materials, mattress ticking, and hosiery, FAIRTEX Yarns with Metallized Mylar* are highly heat resistant, can be safely washed, drycleaned or scoured and do not tarnish.

There's no flaking or breaking of metal when you weave or knit with FAIRTEX.

For economy and efficiency, start using FAIRTEX Yarns with Metallized Mylar* *now* with cotton, wool, silk, linen or synthetics. You get greater yield per pound with smoother, more pliable and more uniform FAIRTEX Yarns.



...lustre that lives...for the life of the fabric!

FAIRTEX® YARNS

Metallized Mylar* • Metallic • Supported Metallic

FAIRTEX CORPORATION—CHARLOTTE, N. C.

CHICAGO
Napier & Harshman
3555 Peterson Ave.

CHARLOTTE
Lanier Branson, Jr. and J. E. MacDougall, Jr.
1808 Liberty Life Bldg.

NEW YORK
Robert Napier
51 E. 42nd St.

*Registered Trademark for Dupont's Polyester Film

These tags take the performance guesswork out of buying rayon and acetate apparel

A quality fabric containing Avisco fibers
AVISCO
INTEGRITY TAG
WASHABLE
A quality fabric containing Avisco fibers
AVISCO
INTEGRITY TAG
MACHINE WASHABLE
AT WARM SETTING
A quality fabric containing Avisco fibers
AVISCO
INTEGRITY TAG
DRY CLEANABLE

This tag certifies complete washability. Colors will not fade or bleed, the fabric will not shrink out of fit and it will resist chlorine damage.

This tag certifies that the fabric may be safely laundered by machine or hand in water not exceeding 105° F. Fabric characteristics are maintained just as with the completely washable identification.

This tag certifies that the fabric may be safely dry cleaned by any reputable commercial cleaner. The fabric will resist fume fading and color migration due to perspiration.

There's guesswork enough in the realm of style.

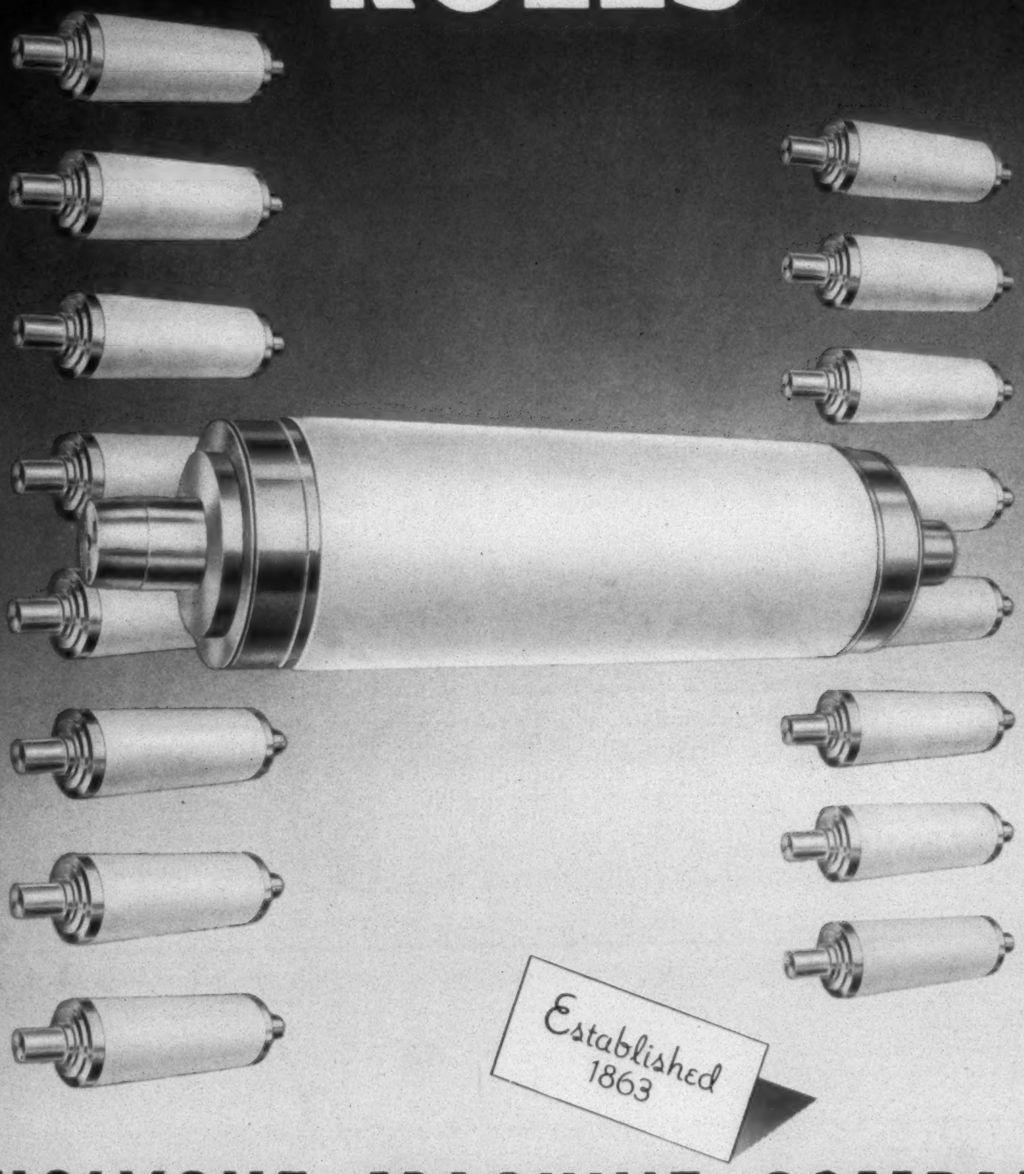
Performance, on the other hand, need keep no one guessing. It can be predicted, controlled, and quickly settled at point of purchase and at point of sale. It speeds transactions on the floor.

IF, that is, the fabric is made of Avisco rayon or acetate. Or blends or combinations of these with other fibers.

AND IF it carries the Avisco Integrity Tag, which assures the customer of quality construction and materials and tells her exactly what performance to expect.

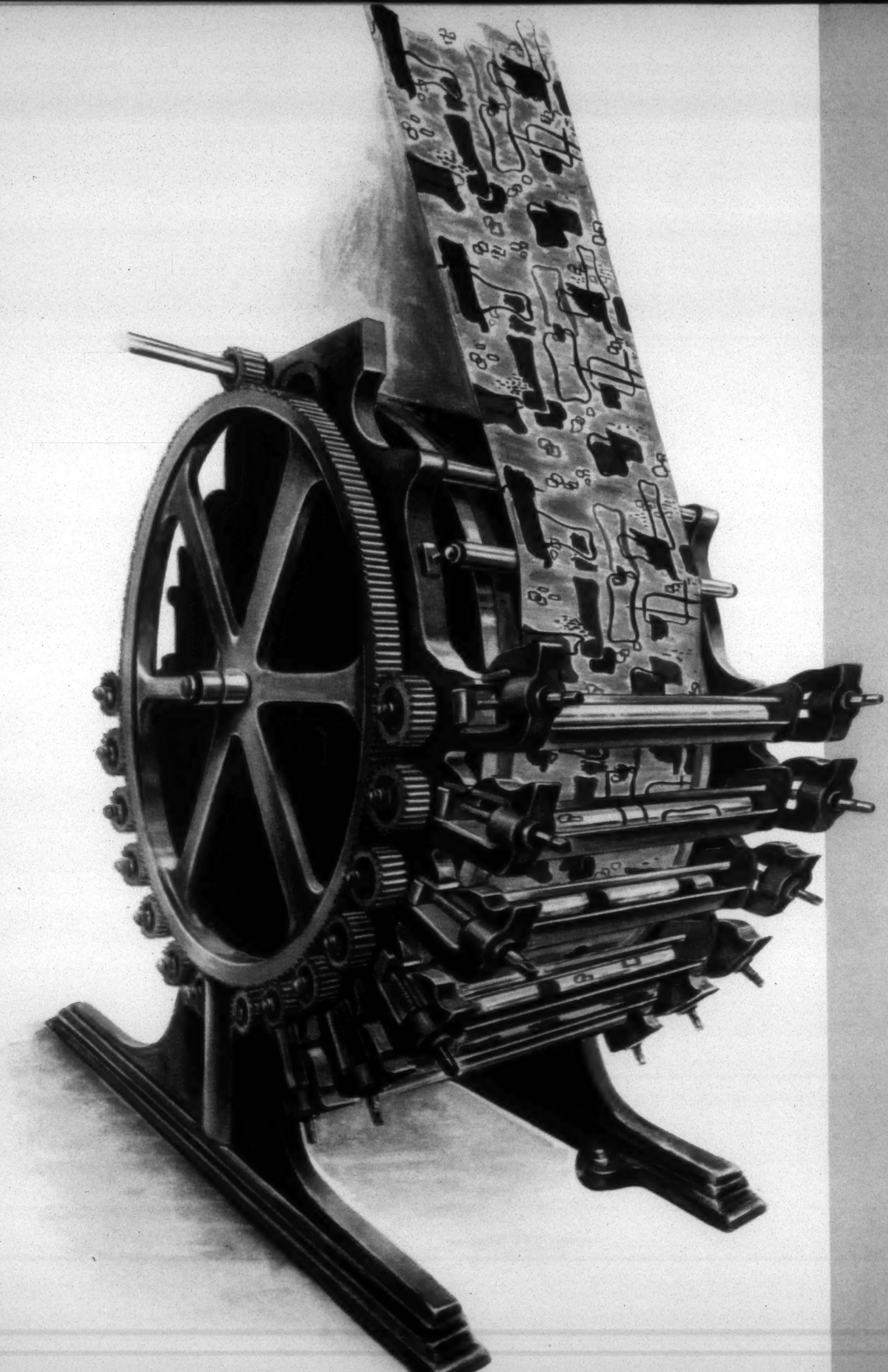
This tag is backed by millions of dollars' worth of national magazine and TV advertising, and frequent mentions by fashion editors and commentators. American Viscose Corp., 350 Fifth Avenue, New York 1, N. Y.

"HOLYOKE" CALENDER ROLLS



HOLYOKE MACHINE COMPANY

CALENDER ROLLS for the PAPER and TEXTILE INDUSTRIES
WATER FILTRATION EQUIPMENT
HOLYOKE, MASSACHUSETTS



Here's the NEW Du Pont savagraph process for highest quality printing with "VANTASOL"* vat dyes

Prints . . . Reduces . . . Develops at High Speed . . . Gives Higher Quality Print Than Present Vat Printing Methods

Du Pont research has developed a new printing process that gives you a great opportunity to increase the efficiency of your printing operations. The new Savagraph process, using the newly developed "VANTASOL" Dyes, also gives you a higher quality print than present vat printing methods.

These advantages, combined with high speed printing and steaming, all point to the start of the greatest advance in vat printing in 30 years.

Here's How The Savagraph Process Works:

Specially prepared Du Pont "VANTASOL" Dyes are compounded into unique water-in-oil emulsions. Printing is done on conventional equipment at top machine speed. Prints are developed by padding with caustic soda and hydrosulfite followed by steaming in a simple, inexpensive flash ager. Steaming times will vary from ten seconds to one minute, depending on weight of fabric and pattern. After being oxidized, only a mild soaping is needed. The Savagraph process using "VANTASOL" Vat Dyes gives the *highest degree of fastness* to all color destroying influences—washing, bleaches, sunlight, salt water.

Here's How Your Quality Improves:

Printed fabrics have a dyed effect in the blotch areas—with the finest overall coverage and smoothness.

You get exceptional sharpness in reproducing delicate patterns in the engraved design.

You get increased crock fastness over vats printed by present methods.

The Savagraph process and "VANTASOL" Dyes can be used to print all types of cellulosic fabrics.

Here's How You Can Get Further Information:

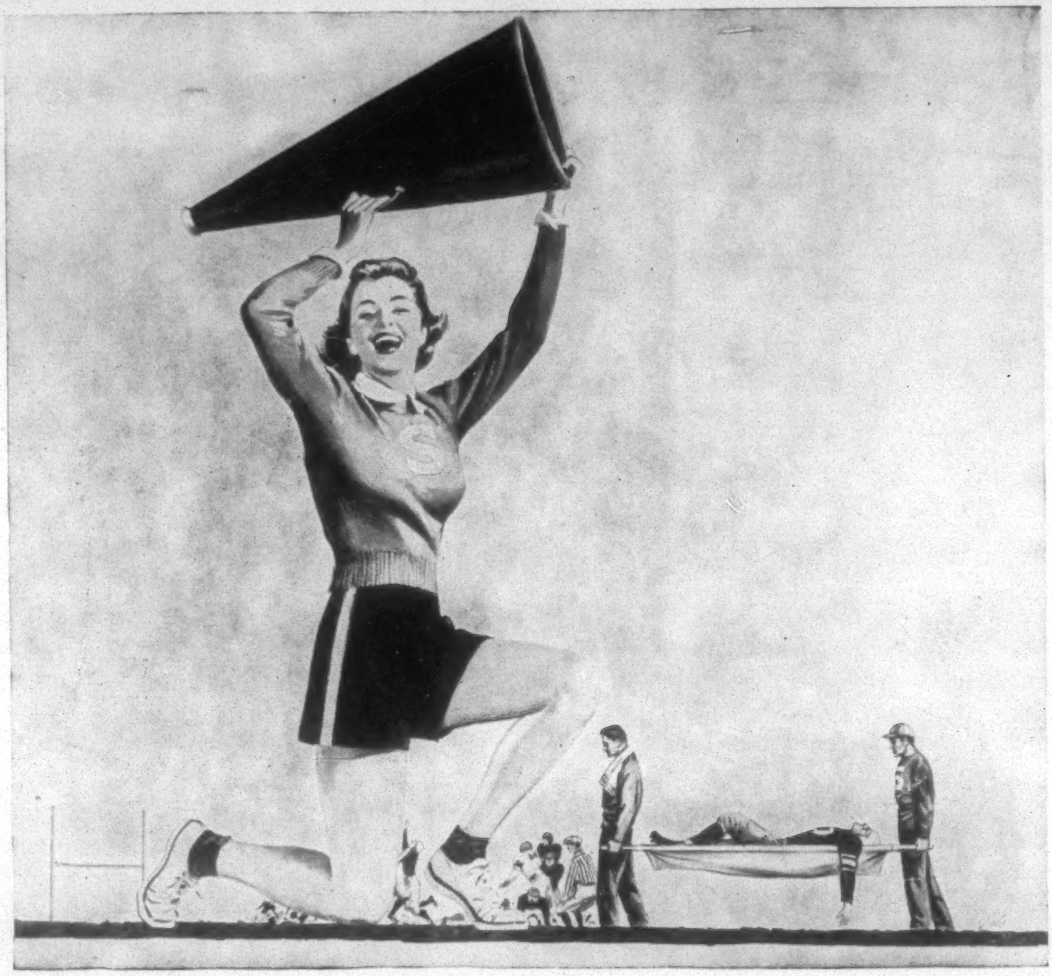
Like all new processes, the Savagraph process will have to be worked out at your plant, with your equipment. Du Pont Technical Representatives will be glad to consult with you and arrange for a demonstration. So get in touch with your Du Pont Dyes and Chemicals representative or your nearest district office. E. I. du Pont de Nemours & Co. (Inc.), Organic Chemicals Department, Dyes and Chemicals Division, Wilmington 98, Delaware.

*Trademark

Du Pont Dyes

DU PONT
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*



"SAYING IS ONE THING, DOING ANOTHER"

Montaigne

How are we doing?

It's easy for this young lady to leap to the conclusion that everything's just dandy. As for the young football player making a weary and willing exit, well, it's been a long, long day. Let's just say the spirit was willing but the flesh is weak.

We at Burlington know that oftentimes saying is one thing and doing is another. In the course of our $4 million a year research program, we see a lot of new fabrics make a bid for the Burlington team. Some of them we have to reject—if they fail to perform satisfactorily in even the slightest degree.

Because our 45,000 employees all feel this way, the Burlington triangle has come to be the recognized symbol of quality in fabrics and hosiery.

Burlington
INDUSTRIES, INC.

EXECUTIVE OFFICES: Greensboro, N. C.

Member Organizations

Burlington Mills, Pacific Mills, Burlington Hosiery Co., Peerless Woolen Mills, Burlington Decorative Fabrics Associates, Galey & Lord, Goodall Fabrics, Burlington Narrow Fabrics, National Mallinson Fabrics, Burlington Export Co., Mooresville Mills, Ely & Walker, Burlington International, Hess-Goldsmith & Co., Raeford Worsted Corp.

A NEW MACHINE

LUMMUS

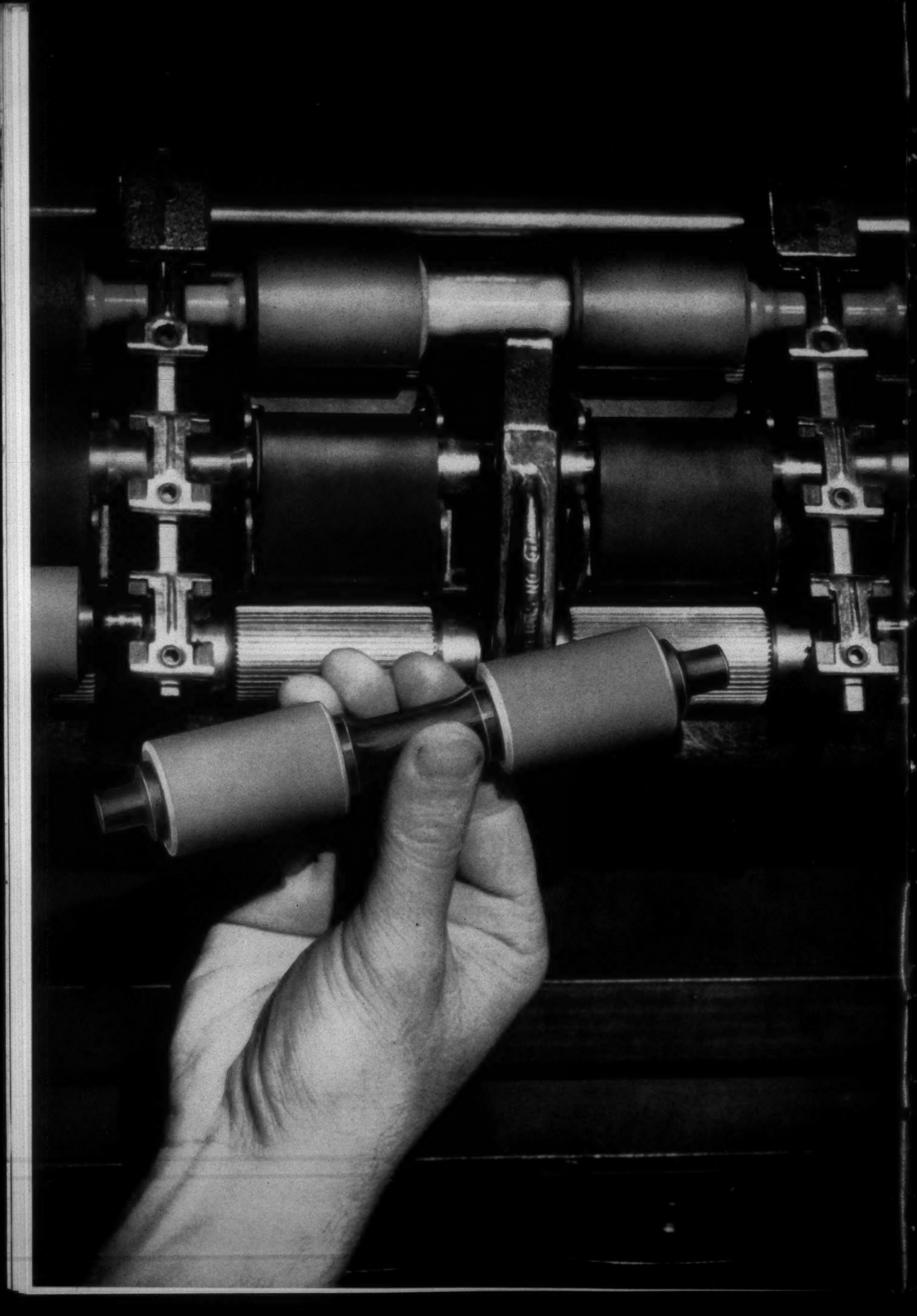
PEPPER-SHAKER

OPENER

MADE BY
LUMMUS COTTON GIN CO.
COLUMBUS, GA., U.S.A.

To Deal with a New Problem . . .

The constantly increasing amount of fine pepper trash in cotton



Armstrong ANNOUNCES...

New anti-static cots with increased lap resistance

Mills faced with increasingly difficult lapping problems now can get the help they need from a group of new anti-static roll covers recently added to the Armstrong Accotex® line.

These new covers are designed to meet the problems created by the growing use of synthetic yarns, the trend toward non-metallic cap bars, and the elimination of other metal-to-metal contacts in frames.

In many mills, the Accotex J-490 Cover will continue to be the preferred cot because of its lap-resistant, patented compounding. Where the conditions mentioned above are found, however, *electrolytes* PLUS *anti-static agents* may be needed . . . and that is exactly what Armstrong textile research engineers have put into this new line of cots.

The function of anti-static agents is to carry off any static charges continuously. This prevents such charges from accumulating on yarn or cots to the point where there is danger of top roll laps.

Extensive field testing over a period of more than a year indicates that these new compounds practically eliminate lapping caused by static. In many cases they also significantly reduce waste.

Like all Accotex Cots, these new roll coverings will give long service. They need rebuffing at infrequent intervals, and the rebuffing does not impair their built-in anti-static properties.

With Accotex J-490, these new materials form a complete group of cots which will control lapping on spinning and cardroom frames. Where high static aggravates the lapping problem, these three new compounds are offered:

Accotex *NC-762* for frames with flat clearers

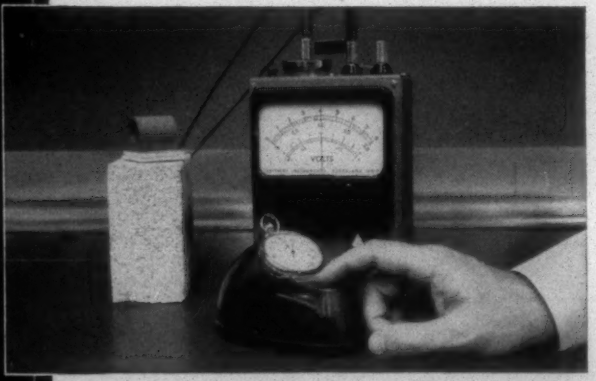
Accotex *NO-764* for frames with revolving clearers

Accotex *NO-763* for comber detaching rolls

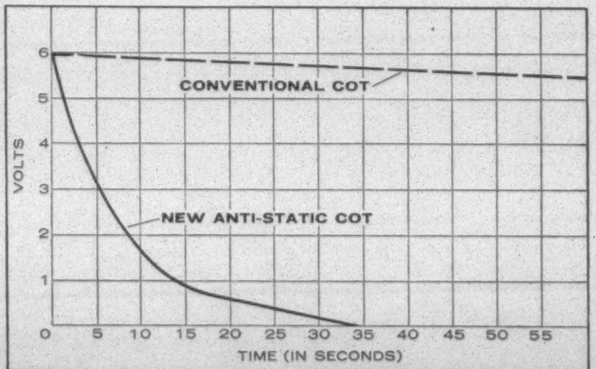
Be sure to see these new Armstrong anti-static cots at the 19th Southern Textile Exposition in Greenville, South Carolina. Or write for more information to Armstrong Cork Company, Industrial Div., 6510 Davis Ave., Lancaster, Pa.

Armstrong ACCOTEX COTS

. . . used wherever performance counts



NEW ANTI-STATIC COT IS CHECKED in this test. First, an electrical charge is stored in a condenser by connecting its terminals for a moment to a six-volt battery. Next, the cot to be tested is placed upon a pair of needle-point contacts to which the condenser is wired. The cot thus provides a path through which the electrical charge in the condenser can flow.

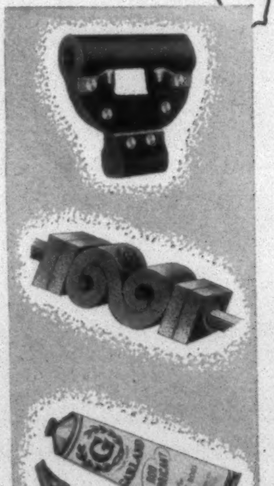


The speed with which the cot discharges the condenser is shown by the rate at which the meter on an electronic voltmeter drops from 6 volts to zero. A stop watch is used to measure the time it takes. Typical results are plotted on the graph above. The new Armstrong anti-static cots bleed off a 6-volt charge in less than 35 seconds. A conventional cover takes over an hour to discharge the same voltage.

Back Home from the Greenville Show

Looking Ahead to Our Next

90 Years



Looking back on our first 90 years (yes, since 1866, Garland has been serving the textile industry)

. . . and looking back on one of the best Shows we ever attended . . . has set us to doing a heap of thinking.

Old friends, and new friends we talked with in Greenville, convince us we're good for another ninety and more years.

Right now we're thinking ahead with one purpose in mind

. . . ways of meriting your continued confidence by maintaining Garland quality and service.

This accomplishment is our pledge to you.

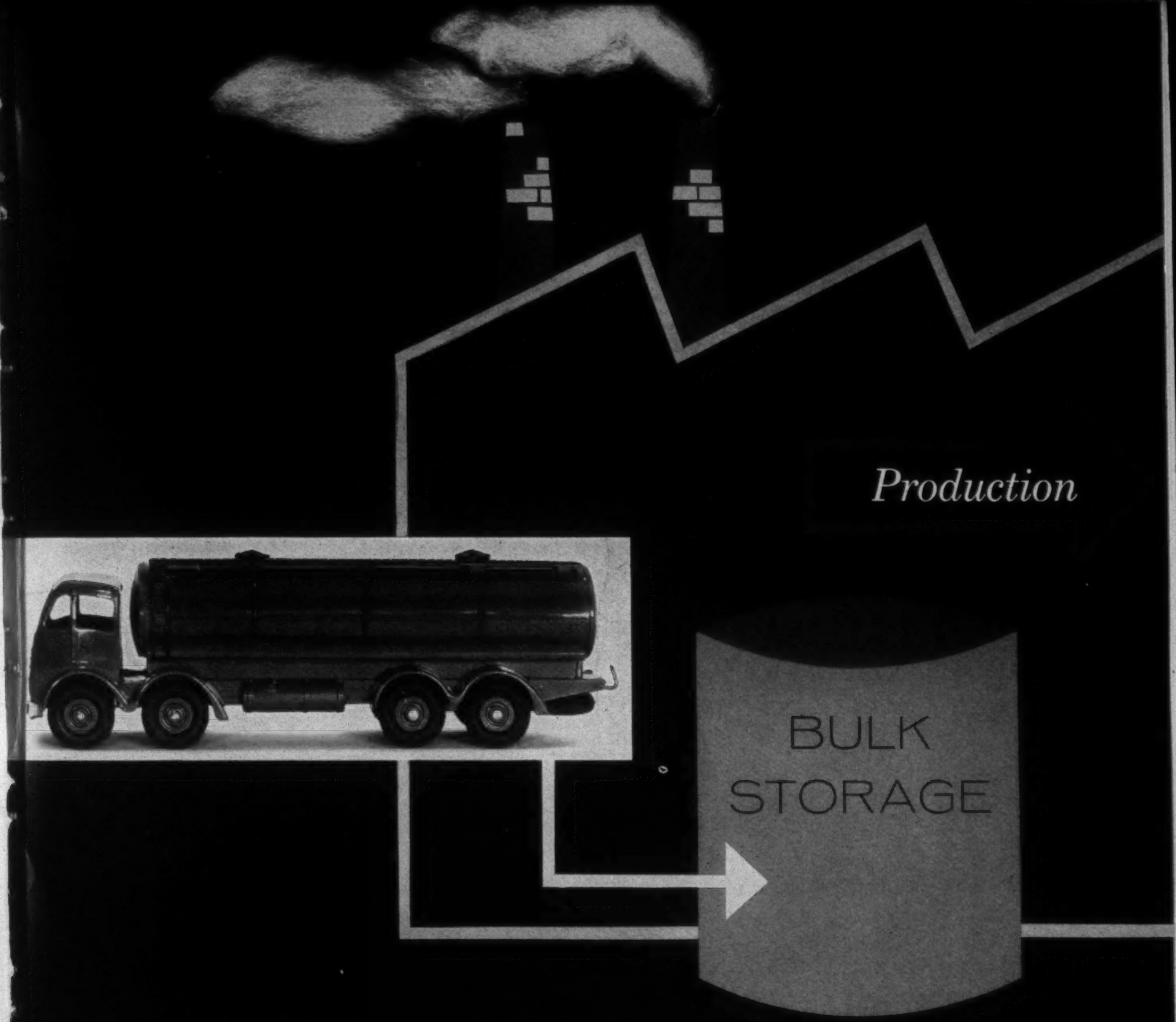
THANKS!

Peter A. Garland
Laurence S. Garland Jr.
Frederick L. O'Neil
Frederick L. O'Neil Jr.
Harry P. Garland 2nd

Garland MANUFACTURING CO.

Manufacturers of Rawhide Loom Pickers • Sponge Leather Bunters • Rod Lubricant • Hair-on Loom Leathers • Rawhide Hammers and Mallets

WATER STREET • SACO • MAINE



Cut your finishing costs . . . buy Resloom* resins in

BULK

Adapt your receiving system to profit from the economy and convenience of bulk deliveries

MONSANTO

*RESLOOM: REG. U. S. PAT. OFF.

There are two ways you can take advantage of the lower, bulk prices of Resloom finishing resins. One is to install a permanent tank storage installation. The other way is through a temporary receiving system—you buy in bulk and drum the material right at your own plant as you need it. Any installation expense can soon be offset by the sharp difference in material costs.

Many finishing plants are saving this way—and profiting from another Monsanto bulk convenience: finishing resin and catalyst delivered in one combination truck or tankcar-load—at bulk prices for each!

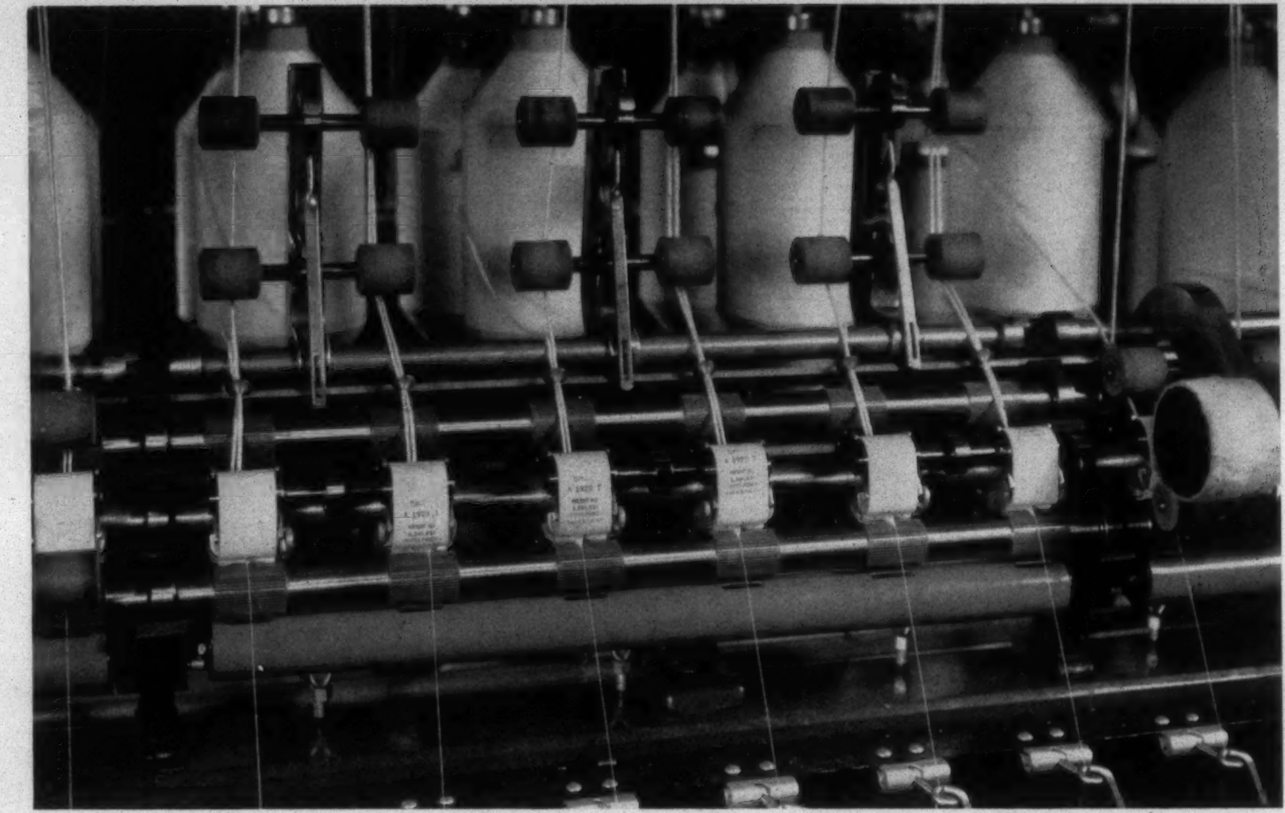
This Monsanto special textile service is part of a program which includes extensive—and productive—research in creating new finishing resins to meet the challenge of the many new fabrics and blends. Draw on Monsanto textile service. Write to Monsanto Chemical Company, Plastics Division, Room 1022, Springfield 2, Massachusetts.

The newest name in Anti-Friction spinning is

nyaf®

. . . A product of 50 years
Service and Quality in Textiles

Patent applied for



NEW, PROVEN nyaf® OUT-PRODUCES ANY ANTI-FRICTION SPINNING YET DEVELOPED!

Swing Saddle Center Suspension, Full Anti-Friction Top and Bottom Spinning Roll Assembly . . . Drafts of 10 to 60!

Here is anti-friction spinning operating at its very peak of efficiency—without parallel in bringing new economy, new dependability, and new ruggedness to your spinning. AND N Y A F® CAN BE ADAPTED TO ANY MANUFACTURER'S FRAME.

Roller Stand 45°. Straight line from trumpet to thread guide. Sealed ball bearing fluted rolls. Runout not to exceed .003". All diameters .0015". No more lubrication problems and worn roller necks. All head end gearing anti-friction with silent chain drive. Cylinders and idlers anti-friction.

DOES YOUR ANTI-FRICTION SPINNING HAVE THESE nyaf® FEATURES?

Center-suspension, with rugged center support ● Induction hardened rolls, with ball bearings lubricated and double sealed for life ● Only two moving parts ● Positive dead weight ● Front and middle rolls, with back rolls spring weighted ● Front and back rolls easily dismounted for cleaning and buffing ● No end play in center support ● Fine adjustment of cradle to 5/1000" ● Cannot get out of line ● One adjustment, versus 12 as on old type frame ● Rugged construction takes care of effective weighting up to 120 lbs. and over if necessary, at any roll speed desired ● Assembly and erecting time one-half that of conventional methods ● No oil, therefore less lint ● Cleanest operating assembly available anywhere ● Precision-engineered for perfect roll alignment at all times with fluted drafting rolls ●

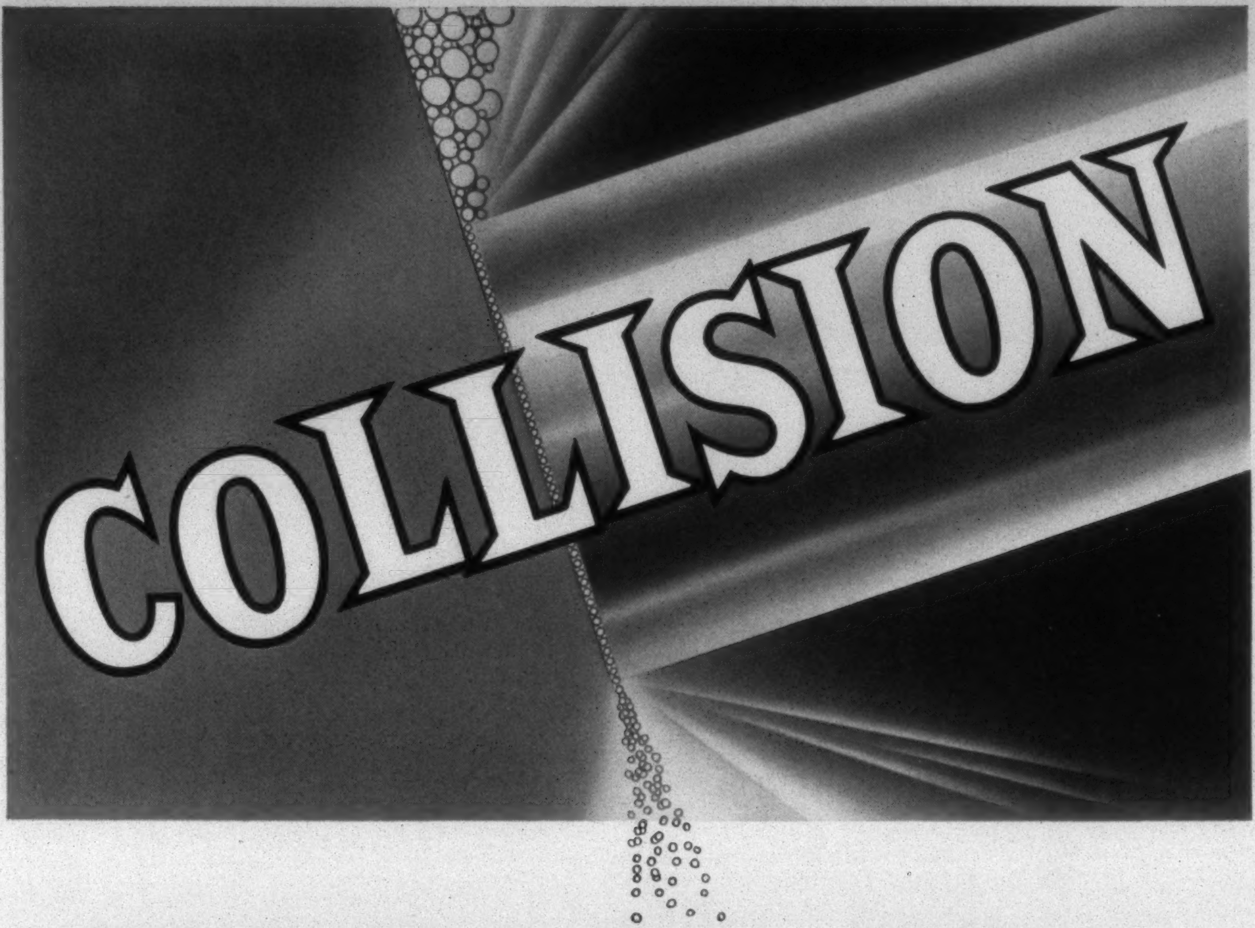
Nearly Fifty Years of Service and Quality NY *Twenty-five Years in the South*

norlander-young machine company

Telephone UNiversity 5-8556

GASTONIA, NORTH CAROLINA

FLUTED ROLLS FOR SPINNING • FLYER FRAMES • COMBERS • DRAWING & LAP MACHINES • NYAF



Converts size particles more uniformly in a Gaulin Homogenizer

Here's why hundreds of mills prefer Gaulin Homogenized size. They find the mechanical conversion of size by a Gaulin is faster, more thorough, and less expensive than old fashioned cooking methods.

A Gaulin pumps size at tremendous velocity through a microscopic orifice. Size particles collide, expand and explode . . . break up into a uniformly finer mixture instantly . . . give you a closer viscosity control.

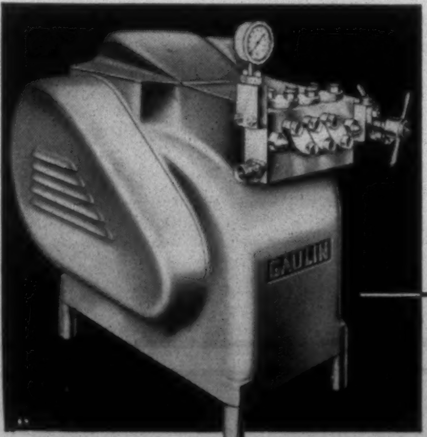
The result? Mills find they can switch to Pearl Starch. Most report a decided improvement in the quality of their warp yarn. They save on starch, steam and supervision . . . make less hard size . . . and can store Gaulin-Homogenized size as long as 48 hours.

We'll be glad to install a Gaulin Homogenizer for you on a guaranteed-performance basis. Whether you're making cottons, worsteds or synthetics, write for information.

MANTON-GAULIN MFG. CO., INC.
66 Garden Street, Everett 49, Mass.
Southern Representative:
W. A. Hewitt, P. O. Box 961, Greenville, S. C.

Here are some of America's Leading Mills Using Gaulin Homogenizers

ALICE MFG. CO.
MARION MFG. CO.
CAROLINIAN MILLS INC.
RIEGEL TEXTILE CORP.
JACKSON MILLS
CLIFTON MFG. CO.
INMAN MILLS
MAYFAIR MILLS
JOHN P. KING MFG. CO.
CANTON COTTON MILLS
MUSCOGEE MFG. CO.
COLUMBUS MFG. CO.
DUNSON MILLS
WALTON COTTON MILL
THOMASTON MILLS
EXPOSITION COTTON MILLS
TALLASSEE MILLS



Gaulin Gaulin TRADE MARK

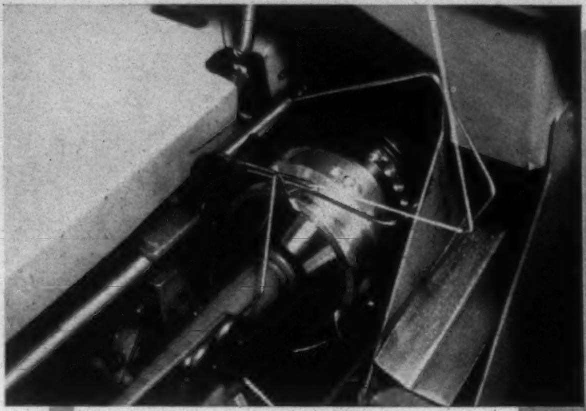
HOMOGENIZERS

WORLD'S LARGEST MANUFACTURER OF HOMOGENIZERS,
TRIPLEX STAINLESS-STEEL HIGH PRESSURE PUMPS,
AND COLLOID MILLS

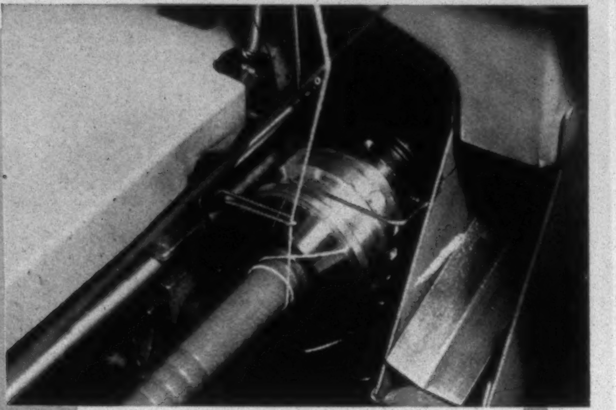
FOSTER-MUSCHAMP MODEL 66* AUTOMATIC FILLING WINDER

A New High in Winding Quality • A New Low in Winding Costs

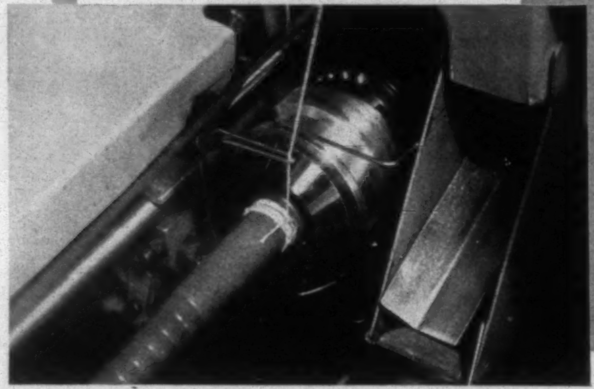
*Manufactured in Westfield, Mass.



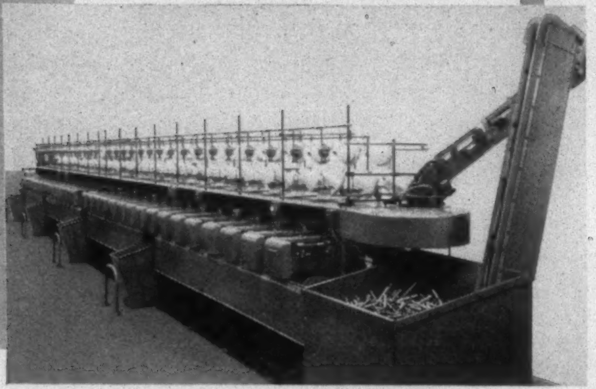
No. 1 — Bobbin entering drive



No. 2 — Commencing the wind



No. 3 — Tail released and secured under first wraps of bunch



No. 4 — Typical installation

NO STARTING TAIL — *A New Feature*

The Foster-Muschamp Model 66 completely eliminates the starting tail on bobbins (see illustrations). Therefore it eliminates the weaving troubles which are caused by starting tails.

This is only one of many features which have enabled the Model 66 not only to set a new high in winding quality, but also a new low in winding costs (as low as ¼¢ per lb. in some cases). Some of the other features are as follows:

- Uniformly perfect bobbins as to wind and density.
- A spindle speed of 15,000 r.p.m.
- Everything is automatic (including pinboarding or stacking of filling boxes and lint cleaning), except piecing up of broken ends and donning and doffing magazine cone creel.

Find out how the Model 66 can increase your quality and lower your costs. Send for our new Bulletin M-4A. No obligations.

FOSTER MACHINE COMPANY

Westfield, Mass., U. S. A. • *Southern Office* — Johnston Bldg., Charlotte, N. C.

Canadian Representative — Ross Whitehead & Co., Ltd., 1475 Mountain St., Montreal, Que. and 100 Dixie Plaza, Port Credit, Ontario

HFL

Especially designed and built to serve as our
SOUTHERN DIVISION HEADQUARTERS.
Daniel Construction Co., Builders; negotiated by
Junius H. Garrison, Jr. of Alester G. Furman Co.

now located in our new building

To better serve you, we have moved into this attractive and efficient building on Wade Hampton Boulevard exactly three miles north of Bob Jones University, in Greenville, S. C. Here, at the headquarters of our Southern Division, we plan to extend to all mills throughout the South this intensive, effective, coordinated

★ 5 STAR SERVICE

- ★ **LARGER, MORE COMPLETE STOCKS** in Greenville, comprising all the most-needed items
- ★ **QUICKER DELIVERIES** (including emergency delivery by our own truck)
- ★ **DIRECT TELETYPE TWX SERVICE** to our main plant in Boston, for special items not stocked in Greenville
- ★ **AIR CONDITIONED DISPLAY ROOM** where customers can study HFL Improved Loom Parts in motion on the looms
- ★ **PERSONAL ATTENTION** from our 5-Star Southern Team with headquarters in Greenville (see photos).

Ernest W. Fanning
Southern Sales Manager

Having 35 years of association with H. F. Livermore Corporation as his background, Mr. Fanning is exceptionally well-qualified to assist mills in the solution of their weave room problems.

Fred T. Harvell

His practical knowledge and experience in textile machinery extends over a period of 25 years. He served a number of years as Supervisor of Weaving and Training in a large Southern textile mill. This supervision covered training in all types of weaving looms. In addition he has had extensive experience in job breakdowns and complete analysis on all loom motions.

H. W. (Hal) Black

Has had 25 years' experience in the textile industry. Worked for 10 years in one of the South's largest textile mills as Overseer of Weaving. Also has worked on quality control, cost control and time study surveys. Has taught classes in loom fixing, warp preparation and other textile subjects. Has had wide experience in all types of weaving looms currently in use by the textile mills.

William T. Jordan

With H. F. Livermore Corporation for eight years. Mr. Jordan spent more than eleven years with two of the South's largest and best known mills serving in mechanical departments and as Stores Supervisor. Graduate of Pelzer (S.C.) High School, studied at Georgia Tech. His practical background makes him a valuable friend of the man in the weave room.

Jess B. Kilpatrick

His education included 2 years of special textile training at Clemson College, South Carolina. He served for 13 years with one of the large textile mills in Greenville, South Carolina winding up as Superintendent of Weaving. Also had about 5 years' experience in the weave rooms of other textile mills in North and South Carolina. In addition he had several years' sales experience in textiles.

HFL
IMPROVED LOOM PARTS

Telephone GREENVILLE 5-5531

H. F. LIVERMORE CORPORATION

ESTABLISHED 1887

EXECUTIVE OFFICES & PLANT
BOSTON 34, MASS.

SOUTHERN DIVISION
GREENVILLE, S. C.

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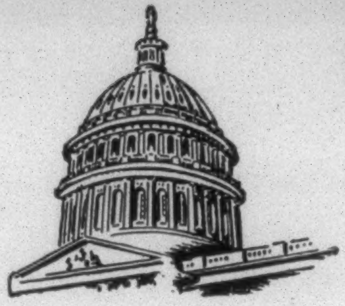
1926 "IF IT'S PAPER" 1956



WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

Conditions in the textile industry are "a crisis for America," the Textile Workers Union of America says in a report to its members and appeal for unionization. It contends that wages are 25 per cent below the national factory average, with the gap growing wider. An "explosion is inevitable" unless the trend is checked, said President Pollock. Mill owners are assailed as "scorning accepted tenets of decent human conduct," and using the "worst form of racial. national and religious bigotry."

In an all-out assault on mill owners, the union charges them with promoting depressed areas, and forcing down wages and working conditions. It cites a textile wage average in the South of $1.25 an hour, compared with $1.60 to $2.35 in other industries. It demands enactment of "civil rights" laws to apply to the South, and for the country, drastic revision of Taft-Hartley, and union recognition in all Southern states.

Organizing targets, and the use of secondary boycotts to force union memberships, in attempting to unionize Southern workers, have been revealed by Teamster Vice-President Hoffa. Hoffa said "we are engaged in a large Southern organizational drive, and trucks down there must and will be organized." The secondary boycott will be the chief weapon, with efforts made to bar non-union trucks from piers and loading platforms. Hoffa claims the right to unionize all workers in a plant served by trucks.

Union leaders propose to intensify organizing in all industries as soon as the political campaign is over. The intent is to move the campaign workers into organizing effort, and direct it on industries that are not fully unionized. Meantime, they are faced with a new intensified investigation of racketeering in the labor-management field at the hands of Senator McClellan's investigating committee.

State right-to-work laws are turning into a major political issue in several state campaigns, with the issue pushed by union officials. Efforts will be made in the legislatures of several states next year to repeal existing laws. Referendums in the matter are on the ballots in Nevada and Washington. for repeal in Nevada and adoption in Washington. Large sums of money are being spent in some states by unions in electing members of legislatures.

Senator McClellan's investigating committee is delving again into alleged graft and irregularities in military uniform and clothing procurement. The inquiry has turned to Vice-President Jim Hoffa, "spark plug" in the 1,400,000 member Teamsters Union. It is alleged that racketeers close to Hoffa have been unusually successful in obtaining sub-contracts to make military clothing. Hoffa's union is alleged to have exerted pressure in moving materials or goods from certain plants by truck, and threatened boycotts or strikes if contracts were given to certain plants.

This country is a "sitting duck" for Japanese textile shipments, and has become the easiest market for Japanese penetration, according to the textile spokesmen. D. B. Tansill, of M. Lowenstein & Sons, said the Japanese invasion has absorbed two-thirds of the market for certain goods, including velveteens and ginghams. He said the invasion of shirts alone amounts to a loss of $27.5 million in wages alone a year. He said raw cotton sold abroad at cut prices is coming back in the form of low-cost goods.

The agreement restricting Japanese textile imports was predicted by House member Charles R. Jonas (R., N. C.) after a conference with the President. Mr. Jonas said he was informed the Administration was "actively engaged" in working out an agreement for limitation, and to apply in particular to velveteens, shirts, sheeting and blouses. He told the President the effects of the Japanese invasion were "extremely serious."

Belief is growing among House members who have been in Washington lately that a sweeping investigation of labor racketeering must be undertaken in the next session. They say that mismanagement of several unions should be coupled with it. With the post-war wage increases, and growth in pension funds, the unions are described as having become extremely lucrative for racketeers, and for certain large unions to extend control over smaller unions.

About 17 million copies of voting records of Senators and House members on controversial labor matters are being mailed by A.F.L.-C.I.O. to all members. Each vote is listed as "right" or "wrong" in the lights of the unions. Brief explanations of the issues involved are given. Taft-Hartley is described as "subjecting unions to injunctions and suits for damages, and outlawing the closed shop, secondary boycott and union hiring halls."

Both political parties are "running scared," and neither one feels it is a sure winner. Each party has a large volume of disaffection, and cleavages that were not known before are coming to the surface. Personalities and mud slinging are growing in industrial areas, with unions stepping up their activity. Some of the big city machines are "sitting on their hands," and there is definite disaffection among the followers of Mr. Truman. Control of the next Congress cannot be forecast now.

Higher Federal truck taxes, to reduce the part of road costs borne by passenger cars, will be urged on the new Congress by groups of automobile owners. State legislatures will be asked to consider a "weight distance," or "ton mile" excise on commercial vehicles. This is a levy based on vehicle weight and miles traveled. The claim is that a gasoline tax is not a fair measure of road use, and that trucks should pay a higher part of proposed road building costs.

Union charges of unfair labor practices against employers filed with N.L.R.B. dropped 14 per cent in the last fiscal year, it is revealed. Last year there were 2,676 such cases, against 3,098 in the fiscal year of 1954. N.L.R.B. finds that individual employees are making greater use of Taft-Hartley provisions against arbitrary union action. Last year there were 1,081 such complaints, compared with 864 in the previous fiscal year.

Unionism, or lack of it, has had little to do with economic progress in the South, said Rev. Edward Keller, professor of Economics at Notre Dame University. He said that right-to-work laws have not stifled economic growth, as claimed by unions. Better times in the South, he said, are the result of increased industry, and less reliance on farming. Total personal income in states with right-to-work laws increased during 1940-54 by 330.6 per cent, he said, and total income of states without such laws increased by 263.4 per cent in the same period.

Delay in adoption of the proposals of the Hoover Commission is costing taxpayers an estimated $532.6 million a year in running expenditures of the government. Possible saving through adoption of the full program is put at $5.5 billion a year. Only 11 of the 101 proposals of the Commission have been adopted, and no action has been taken on 202 other recommendations. About half of the proposals and recommendations require new legislation.

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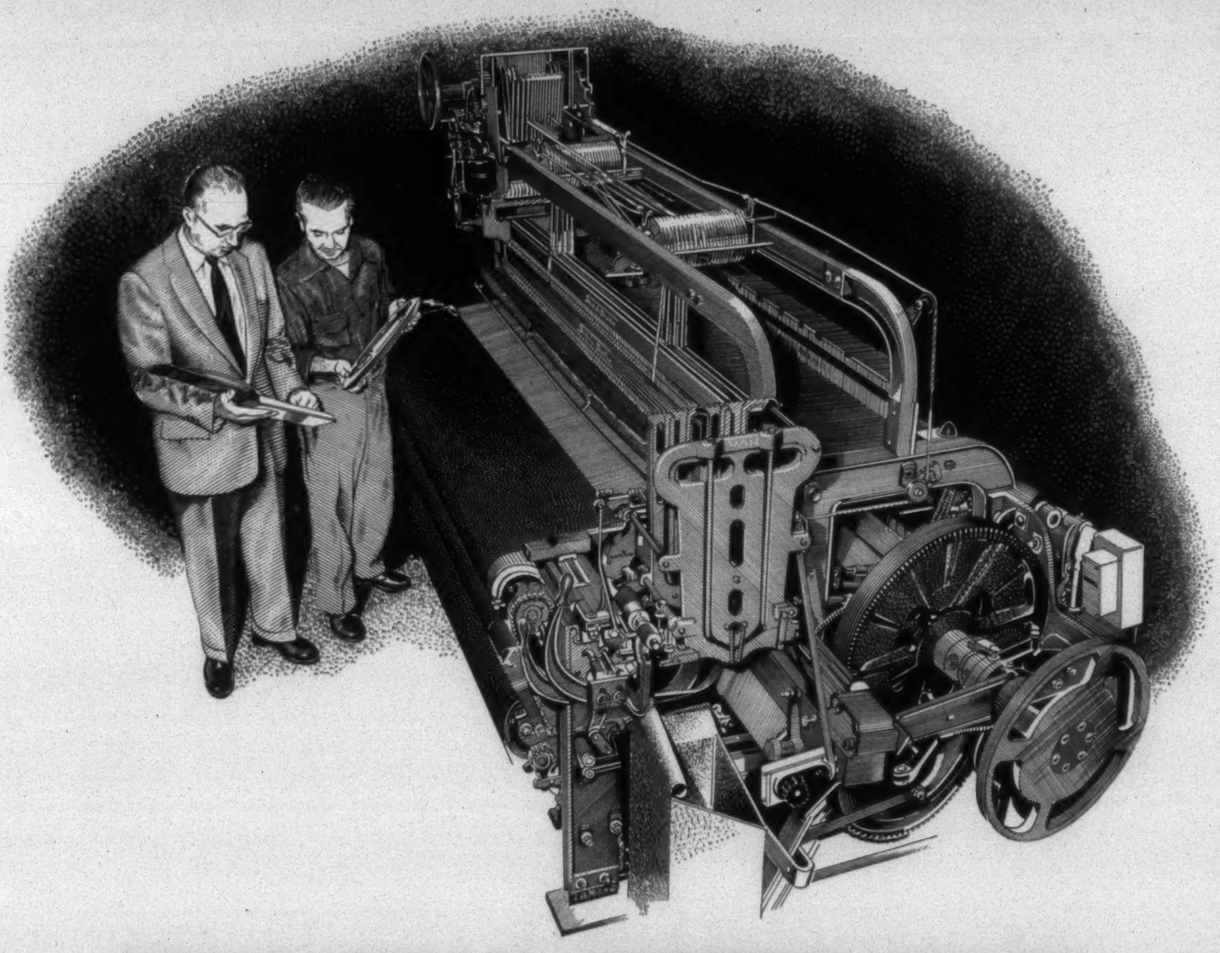

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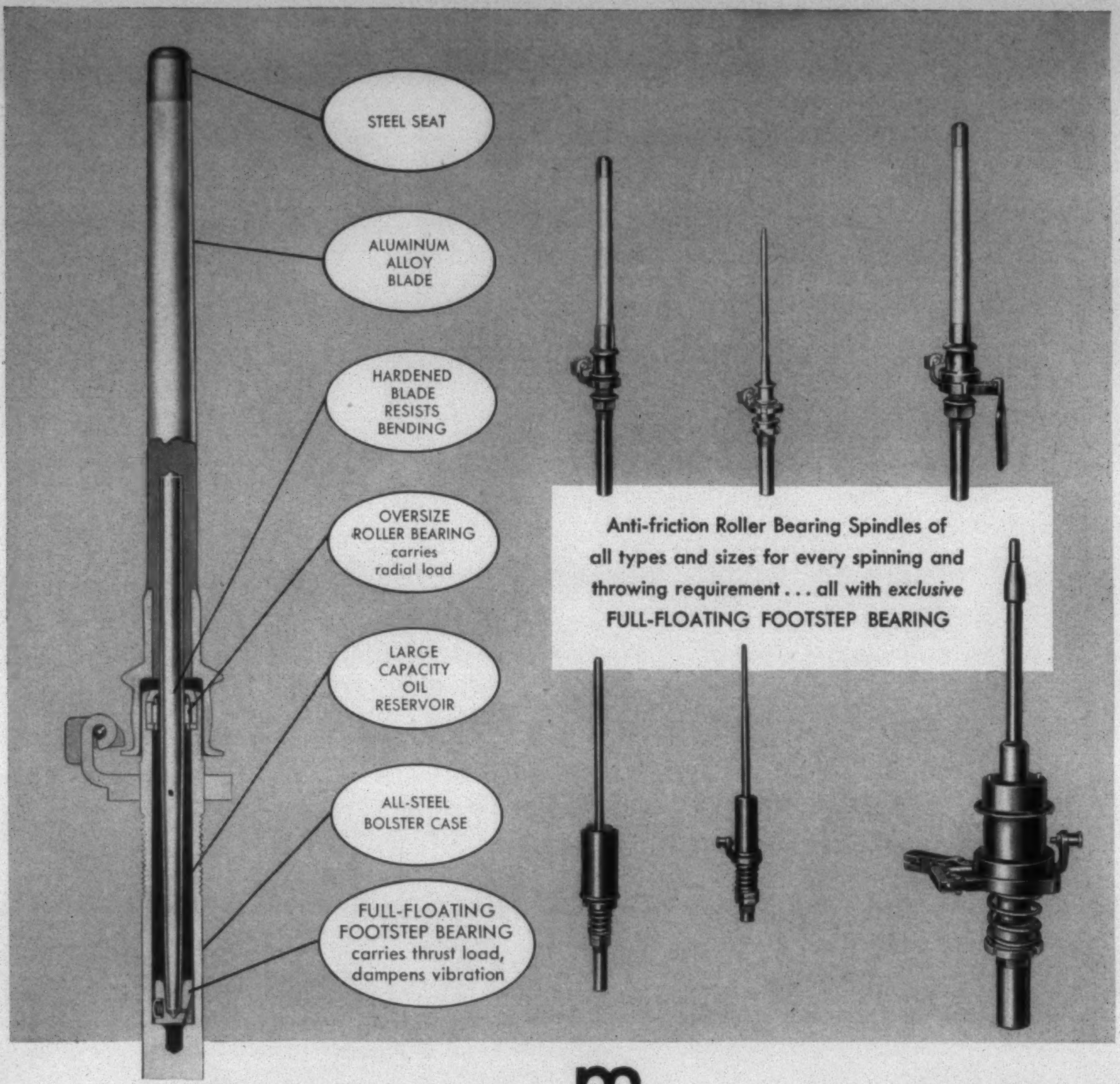
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Anti-friction Roller Bearing Spindles of all types and sizes for every spinning and throwing requirement . . . all with *exclusive* FULL-FLOATING FOOTSTEP BEARING

American-made Marquette SPINDLES produce more yarn at lower cost

The above cross-section view of a typical Marquette Spindle explains why millions are in use today . . . producing *more yarn* at *lower cost.* Every part of every spindle is made in America and is scientifically engineered for superior performance and long life.

No other spindle can offer you all three of these important advantages:

Efficient operation at high speeds

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"GULFSPIN keeps our spindles spinning clean and free"

*says T. F. Snipes, Overseer of Spinning of this prominent southern mill**

"WE have used Gulfspin for almost three years and have found that our 34,000 spindles stay clean with practically no sticking," says Mr. Snipes. "Also Gulfspin doesn't thicken after long usage."

In addition to the benefits mentioned above, Gulfspin provides effective protection against rust—and it reduces power costs because of its ability to maintain its original viscosity after many months of service.

You'll find that the use of Gulfspin will contribute to smoother spindle operation, fewer ends down, and rock-bottom maintenance and power costs.

Contact a Gulf Sales Engineer and let him demonstrate Gulfspin's superiority on your frames. Consult the telephone directory for the number of your local Gulf office.

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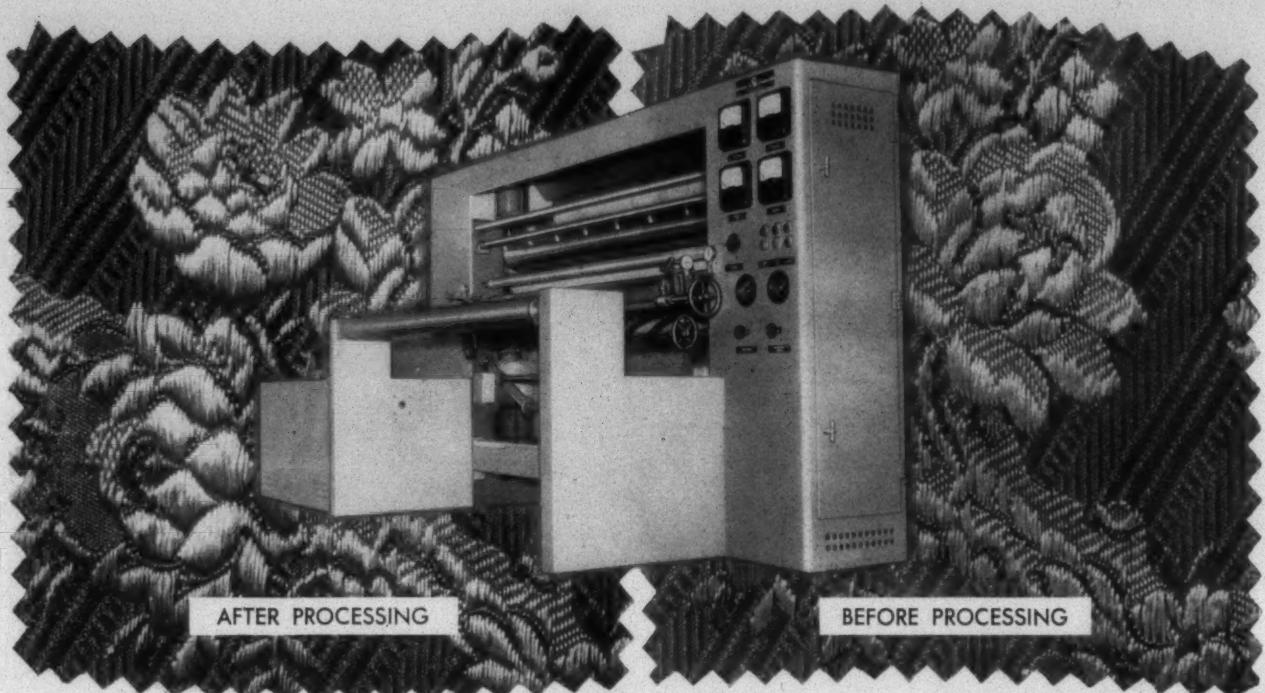
GULF THE FINEST PETROLEUM PRODUCTS FOR ALL YOUR NEEDS

You get

Totally NEW FABRIC EFFECTS

. . . plus Shrinkproofing



with the unique

RIGGS & LOMBARD COMPACTING MACHINE

Now you can command an extraordinary range of special effects — through new compacting methods which enhance the basic structure of goods in unprecedented fashion and *at the same time* shrinkproofs to commercial standards or better.

The R & L compacting machine, particularly designed to practice the new methods, excitingly transforms woven and non-woven fabrics and yarns of many types by mechanical methods — no chemicals! Nubby fabrics look nubbier, patterned weaves are accentuated with depth dimension added . . . and, after these mere beginnings, possibilities for further developments are practically unlimited. Yarns come up much loftier, for use in new and superior yarn-dyed fabrics.

This compacting machine handles a wide range of weights and types from very light to heavy fabrics such as carpeting, and a variety of yarn counts consisting of any fiber or blend. Reasonable in cost, and needing minimum floor space, it can be synchronized for in-line production at relatively high speeds. Replaces sponging process before tailoring on wool, worsted, blended fabrics — also achieves fine felting effects on worsteds and synthetic fabrics.

Riggs & Lombard collaborated in development of this machine for practicing the new compacting methods on woven and non-woven fabrics and yarns of many types. Now we are sole manufacturers and distributors of this machine in these fields, under licenses from the originators, Fabric Research Laboratories, Inc. Write for complete data. Find out how we helped engineer this new machine — and can engineer an installation that will assure *you* of immediately profitable new fabric effects.

RIGGS & LOMBARD, INC.

Foot of Suffolk Street, Lowell, Mass.

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We can arrange for test run on yarns or fabrics to show shrink-proofing and extraordinary new effects — or to have a representative call to show profit potential in your operation. Just write or phone — no obligation.

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Gossett's NEW BIG drawing coiler gives

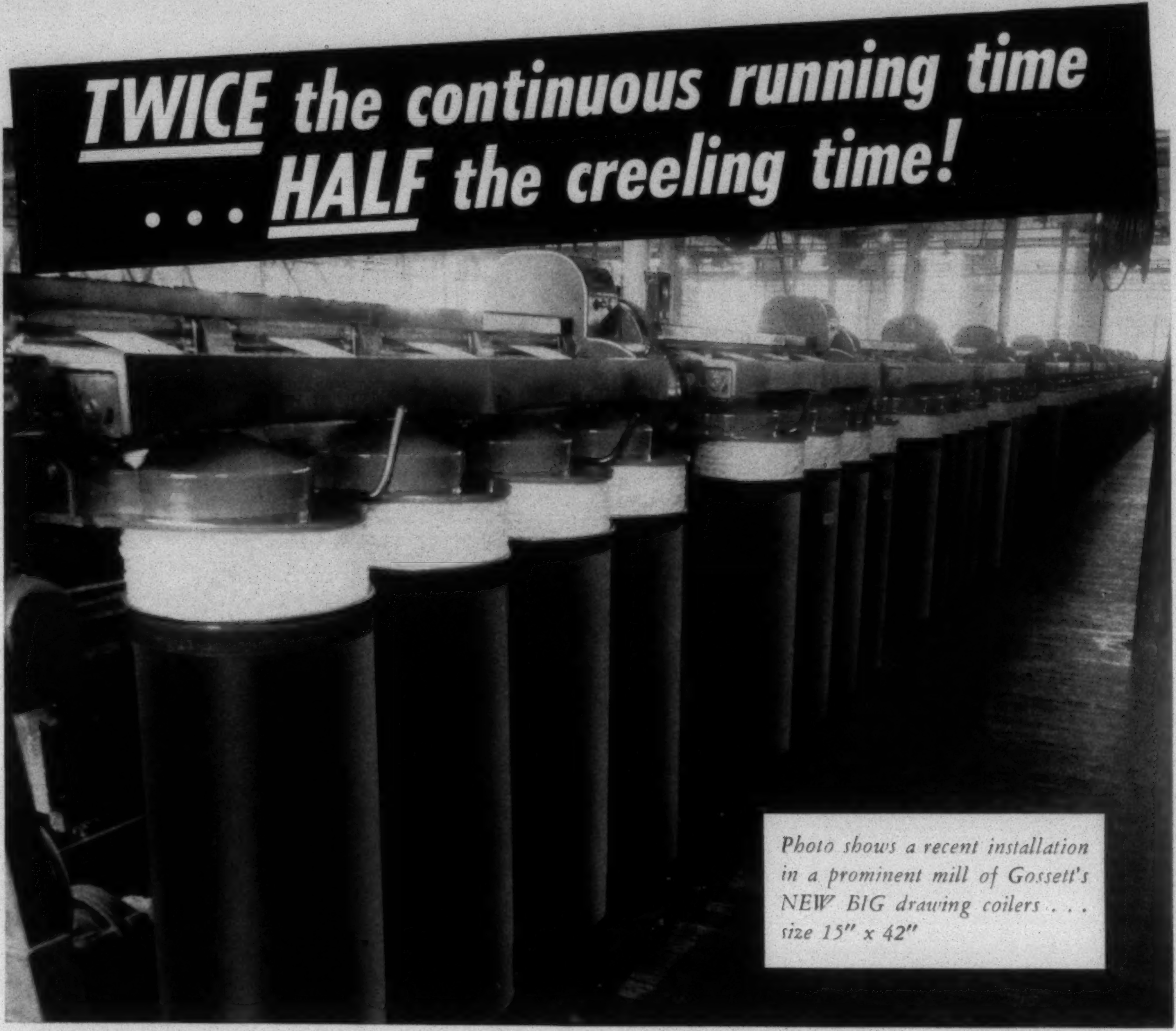
TWICE the continuous running time
. . . HALF the creeling time!

Photo shows a recent installation in a prominent mill of Gossett's NEW BIG drawing coilers . . . size 15" x 42"

From Gossett Machine Works, pioneers in the big coiler conversion technique, comes Gossett's NEW BIG Drawing Coiler!

Here's THE big coiler which is especially constructed for greater all-round efficiency at high speeds!

Smooth, low-noise operation and longer wear are features built-in by Gossett's master technicians.

Get twice the continuous running time . . . cut your creeling time in half . . . install Gossett's NEW BIG drawing coilers on your present drawing frames NOW!

We convert 10" and 12" drawing coilers to 14" through 15" in diameter and 36" to 42" in height.

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Some Plain Facts
About Drawing Equipment

The value of drawing equipment is based on three things—production per unit, sliver quality, and operating cost. We claim, and can prove, that Ideal High Speed Ball Bearing Drawing* excels in all three.

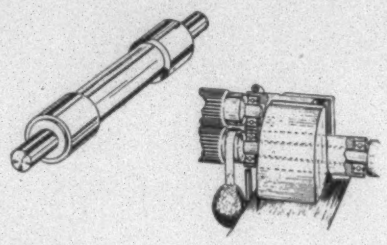
Production

This depends on consistent operating speed. Ideal Drawing will run smoothly and safely at speeds in excess of 450 feet per minute. The exclusive features which make this possible are as superior to ordinary drawing—old or new—as a jet engine is to the propellor type.

A Typical Ideal Installation

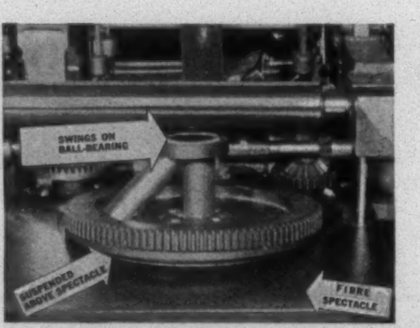
Sliver Quality

Ideal's new principle automatically evens out thick and thin places in the roving, and prevents bruising or cutting of stock. Ideal's exclusive Flute construction imparts a permanent, strength increasing crimp to the stock. Hundreds of strength and evenness testers are daily recording the superiority of Ideal sliver.



Ideal Spacing Section

This is one of the several valuable features found only on Ideal Drawing. These patented ball bearing spacing sections carry *all* of the weight of the rolls . . . transmit *no* resistance . . . and hence never wear to throw the rolls out of alignment. They deliver Ideal Feathertouch Drafting, at high speeds, month after month . . . *year after year . . . with practically no maintenance or adjustments.*



Can be installed on your present frames or furnished on New Ideal Frames

Ideal Coiler Tube Mechanism

The Coiler Tube Mechanism shown below, swings freely *above* the spectacle at high speed. Requires no oil or grease and puts more sliver in each can.

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It costs you less to equip your mill with Ideal Drawing. It costs less in operating labor. Work stoppages for cleaning or reconditioning are practically nil. And one 3 HP motor drives 16 deliveries. Ideal Drawing is billions of pounds beyond the experimental stage and is giving supreme satisfaction in hundreds of mills. We'll be glad to give you the names of nearby users. It will pay you to write for full information on Ideal before you buy.

*Patent Nos. 2,610,363; 2,490,544; 2,412,357.
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Ideal **Industries, Inc.**
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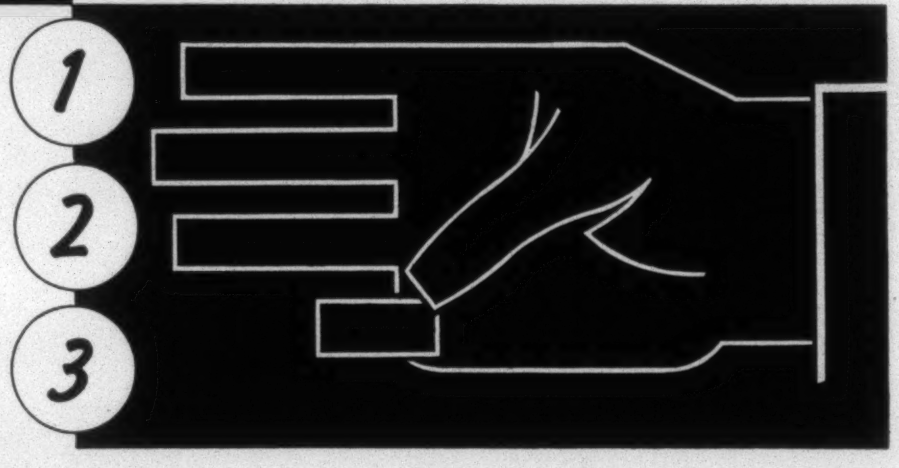
WHY Huyck's *New* PRECONDITIONED COMPRESSIVE SHRINKAGE BLANKETS LAST LONGER...

SIMPLE AS...



1 **Huyck carefully selects and blends only the** finest of **long staple fibers** — the **best obtainable** from the world over.

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3 **Huyck improved manufacturing techniques** minimize wear and abrasion in final blanket finishing.

Aside from the big advantage of *longer service life* — Huyck's *new . . . preconditioned* Compressive Shrinkage Blankets also reduce break-in time . . . minimize costly reprocessing . . . assure smooth finish . . . hold to specified dimensions . . . and require fewer machine adjustments. Combine all these *plus features* and you'll see why so many mill operators say—Huyck offers the ideal "blanket policy," protecting against high shrinkage costs, wasted time and trouble.

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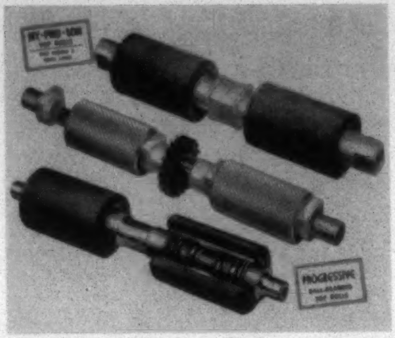
A Product of the Huyck Industrial Fabrics Development Program

For the Textile Industry's Use

Anti-Friction Top Rolls



Top rolls designed to eliminate wear on cap bars, saddles and cradles (Progressive Engineering Co.)

A new principle in top roll design developed by Progressive Engineering Inc. is said to eliminate all wear on cap bars, saddles and cradles. Another feature of the new design, where nothing turns but the bosses themselves, is that the top rolls can be completely disassembled, serviced and reassembled in the mill roller shop. All roll parts are precision machined and are interchangeable.

The manufacturer points out that the front rolls run on 8 precision ball bearing assemblies, assuring absolutely even weight distribution. This in turn helps produce consistently high quality yarns. Exclusive quadruple washer assemblies provide a positive barrier to lint and fly.

The middle roll has a new anti-lap design that prevents damage to either the top roll or bottom gears. A smoothly fitting, easily replaced safety shear pin shears the instant a lap-up occurs. The gudgeons and center spacers of the rolls for middle and back lines are sheathed with a hard, wear-resistant material which requires no lubrication. Roll picking is said to be reduced to a minimum.

The new top rolls are available for cotton, wool and synthetics, in all gauges, with or without end gudgeons, for roving and spinning. Progressive 200 rolls are designed for weighting up to 200 lbs. Progressive 100 rolls, for lighter duty, will take weighting up to 100 lbs. (Request Item No. J-1)

Oil-Repellent Treatment

A chemical treatment that will make fabrics resist oil-borne stains has been announced by Minnesota Mining and Mfg. Co. Called Scotchgard, the treatment, which will also resist water-borne and combination stains, can be applied to men's suiting, slacks, sportwear and top-coating fabrics, including wool and worsted flannels, tropicals, gabardines, sheens and other worsted and worsted-synthetic blends, as well as upholstering fabrics, according to 3M.

The firm asserted that its treatment is the first in the history of the textile industry that will make fabrics resistant to all stains of salad dressings, gravies, lubricating oils, cooking greases, ink, soda pop, coffee, ice cream, milk and other oil-borne and water-borne stains. It said the treatment does 2 things: (1) it makes the fabric oil-repellent and water-repellent, difficult to stain with spilled liquids; and (2) in the event that a slight soiling of the fabric does occur, it is very easy to remove with the ordinary solvent spot-remover, without leaving a ring. It has no visible effect upon the appearance of the fabric, and in most cases actually enhances the fabric's hand, the company said.

It added that the Scotchgard treatment can be applied to many wool, worsted, worsted-synthetic and synthetic fabrics, and as only minute quantities need be applied, the weight of a man's garment is not noticeably increased. Application takes place during the fabric-finishing process in either 1 or 2 additional steps, depending on the method used, and without additional equipment, 3M said. It stressed that ease of application means that cost increases are minimized.

The firm explained that the effect of the Scotchgard fluoro-chemical treatment is to make the fibers of the treated fabric resist "wicking," soaking up liquids. Oil, water and fluoro-chemicals won't mix—as a result, staining fluids stand on the surface of the treated fabric. Pressed between the fibers, they still do not soak in and can be easily removed with spot-remover. Water-borne stains can simply be wiped off with a damp cloth. Unlike many fabric treatments, the Scotchgard fluoro-chemical is not readily removed by dry cleaning, according to 3M. The average fabric can be commercially cleaned at least 5 times and still retain oil-repellency. Further, it was emphasized that the treatment has no adverse effect upon the wearer's skin. The company said that the first fabrics with the Scotchgard treatment will be in men's apparel and upholstering materials and will be available to the public after the first of the year.

(Request Item No. J-2)

Calcoloid Vat Pastes

A program to produce an improved line of more than 45 Calcoloid vat pastes with controlled particle size, called the Calcoloid CPS line, for maximum efficiency and economy in vat dyeing has been announced by the American Cyanamid Co.

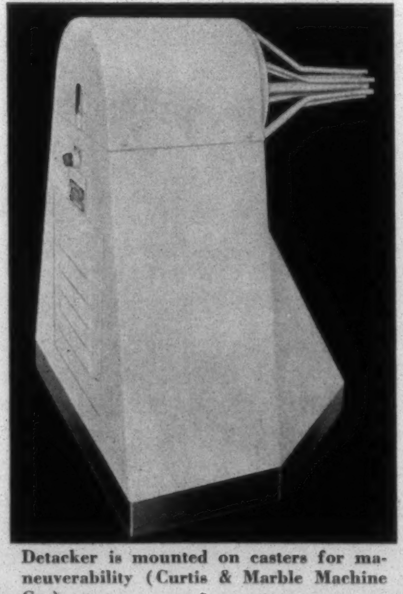
Of prime interest to industry users of vat dyes will be the fact that the new controlled particle size vat dye pastes, each dye having its own most efficient size, will mean a new high in trouble-free operation for the dyer. The controlled particle size vats also have a new maximum high dispersion and excellent working properties. These properties, which add up to fullest money value as well as trouble-free operation to the dyer, include unexcelled non-specking, excellent pigment filtration, a negligible content of non-vatable material and the insurance of complete reduction, which is obtained in a few minutes without excessive quantities of reducing chemicals, it is said.

The improved line will find most usage in fluid paste form. In this form they are also designed to dilute and disperse easily and quickly into dyebath concentration, flow down the side of containers and paddles cleanly avoiding loss of dye and time. They are non-flaking and non-settling under normal conditions. Exhaustive tests have shown the line shows maximum resistance to specking, aggregation and settling in pigment padding of cloth. The dye particles penetrate the cloth thoroughly with excellent reducibility of shades and maximum fastness qualities.

The excellent dispersion properties also aid in stock, beam and package dyeing, meaning more uniform dyeings and raw stock that requires less blending. These superior dyeing characteristics also apply to jig, skein and other reduced dyeing applications, the company points out. Along with individualizing each dye with the ideal particle size, Cyanamid has also inaugurated extensive safeguards to control these sizes during production and afterwards with the company's quality check system. This system entails the use of such modern instruments as the electronmicroscope, as well as rigidly controlled practical application tests.

(Request Item No. J-3)

Portable Detacking Machine

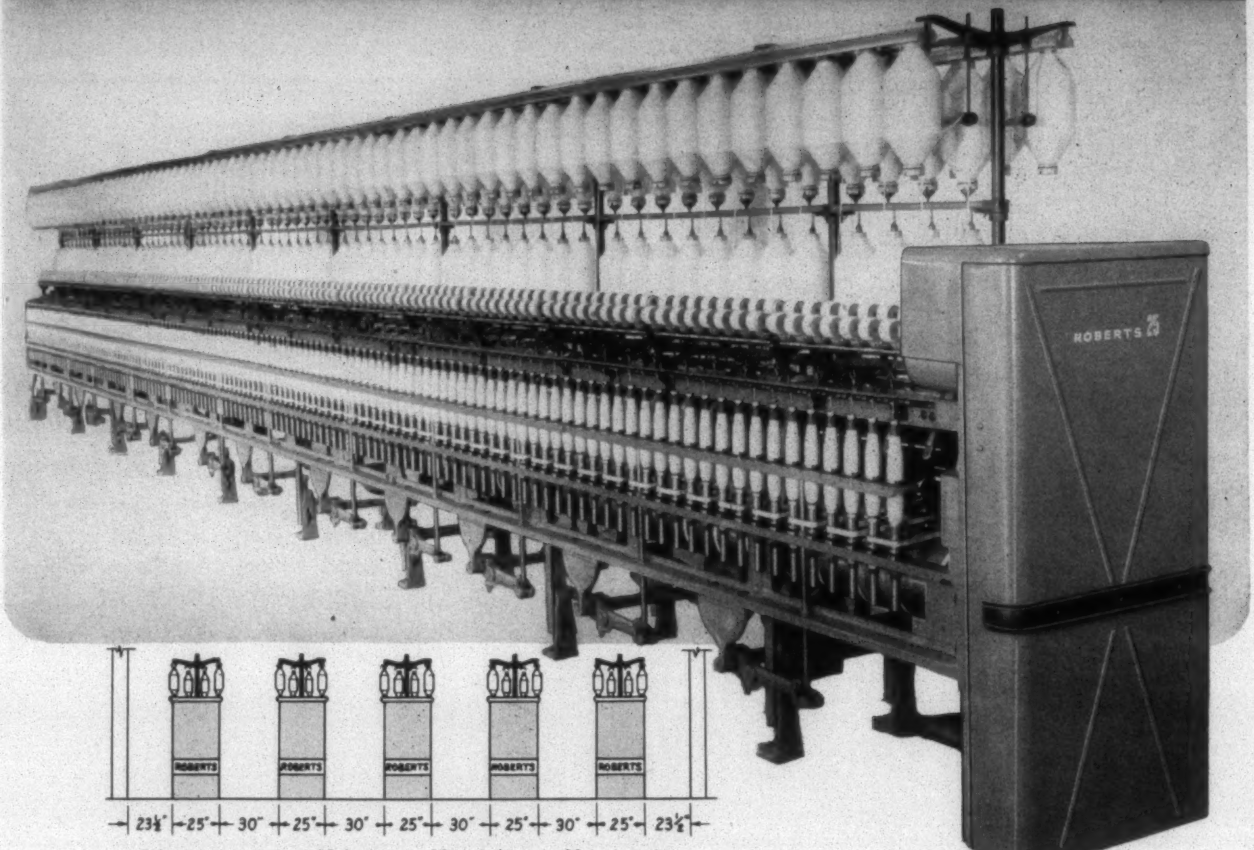


Detacker is mounted on casters for maneuverability (Curtis & Marble Machine Co.)

A new portable detacking machine of modern design has been announced by Curtis & Marble Machine Co. Tested in actual mill production, this detacker successfully

ROBERTS 25 SPINNING FRAME

- 25 inches wide
- 25% more yarn from same floor space
- 25% less building for same production
- 25% saving in building and utility cost



5 frames in a typical 25 foot bay—25 inch frames, 30 inch aisles

TRIED AND PROVEN. The Roberts 25 Spinning Frame is simple and straightforward, free from radical innovations or gadgets. It embodies all the tried and proven features most wanted in a modern spinning frame giving highest production and lowest maintenance.

ROBERTS DRAFTING. Roberts Double-Apron Drafting produces highest break factors, best yarn evenness and lowest ends down in a range of drafts from 10 to 60, for yarn numbers from 2's to 100's, in cotton, synthetics or blends.

SMALL, MEDIUM OR LARGE PACKAGES. The Roberts 25 Spinning Frame is available in gauges from 3 inches to 4½ inches and can be arranged for direct filling on 8 or 8¾ inch quills or for warp up to a 3 inch ring and 12 inch bobbin.

ALL BALL BEARING HEAD. The all ball bearing head design is outstanding in its simplicity and flexibility. Thirty greased-for-life ball bearings of one size are used and all plain bearings and studs eliminated. All gears in the head are hardened and have one pitch, one width, one bore and one size key, making them completely interchangeable. Two wrench sizes fit all shafts and tightening points. Draft Constant can be varied simply from 400 to 3200 and Lay adjusted for coarse or fine numbers by a simple gear change.

STANDARD FEATURES

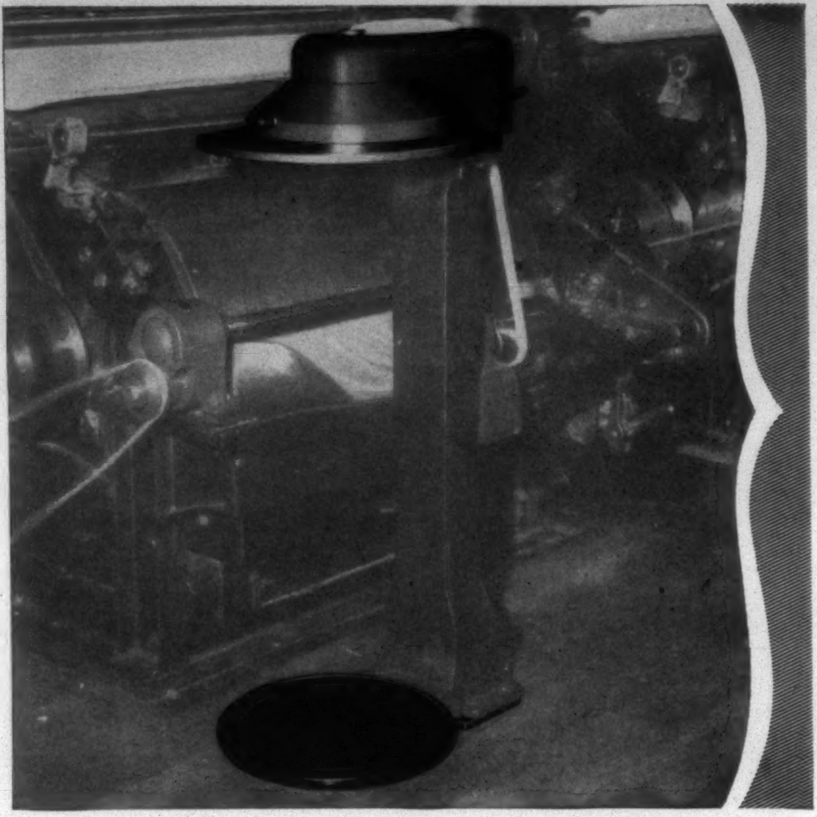
Included as standard equipment are Roberts Ball Bearing Spindles, Roberts built-in Suction Cleaning, Roberts AeroCreels and 8 inch Cylinder Drives.

COMPARE ALL 3

For high production, top yarn quality, large packages, low maintenance expense, dependability—and, at the lowest investment per spindle—Roberts Spinning is second to none in America today.

ROBERTS COMPANY

SANFORD, NORTH CAROLINA



SOUTHERN STATES' NEW COILER HEAD AND BASE MAKE CONVERSION TO LARGER CANS SELF-PAYING

For mills seeking a low initial cost for conversion to larger cans, Southern States' new conversion unit is the answer. It consists of: 1) the identical, vastly improved ball bearing head used on the new complete coiler; 2) an adapter spacer and upright shaft for increased coiler height necessary to accommodate 36″ or 42″ cans; and 3) a new, standard-type base assembly with a conventional gear system for driving the can table. All necessary components are furnished in kit form for quick installation, *using your existing stands.*

Southern States' Conversion Units are designed for use on any make cotton card and for accommodating cans of larger diameter.

Case histories of mills prove conclusively that Southern States' conversions are so economical they soon pay for themselves. For a small initial investment, you enjoy all the advantages of more efficient handling; lower operating costs; improved quality; simplified oiling; ease of maintenance; smaller parts inventory; and years of satisfactory service.

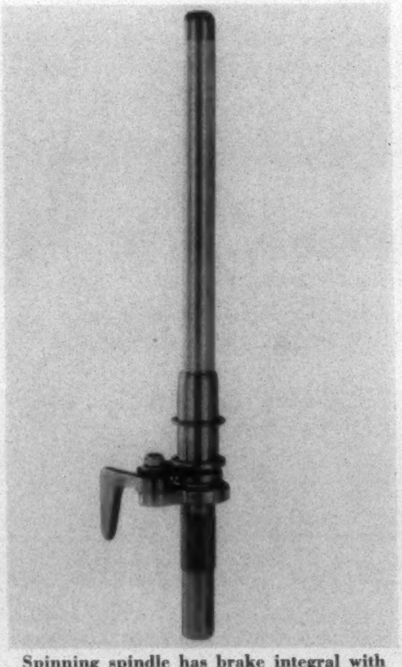
Get full facts from your Southern States representative or write direct to us for Technical Bulletin No. 203- b

SOUTHERN STATES
EQUIPMENT CORP.
HAMPTON, GEORGIA

operates at speeds up to 110 y.p.m., compared to a maximum speed of 25 y.p.m. when detacking by hand. Only one operator is required to handle the goods as they come from the fulling mill to the de-twisting operation to the detacker and then to the scutcher. The detacker can be set to run at the same speed as the scutcher, this speed being determined by the type of goods being processed.

Mounted on casters, the detacker can be easily moved. The machine is constructed with a ventilated case of heavy gauge sheet steel with removable hood for easy inspection and maintenance. The machine features a thread creel of round steel bars so shaped as to permit quick removal of accumulated threads. The detacker is placed parallel to and below the doubled cloth which is being drawn into the scutcher and the thread is automatically wound onto the revolving thread creel as the cloth passes by. Power is supplied by a ¼ h.p. motor. Floor space required is 24″ x 28″. Over-all height is 38″. Machine weight is 200 lbs. This detacker can also be made for mounting on a platform, or for attaching to a ceiling or wall. (Request Item No. J-4)

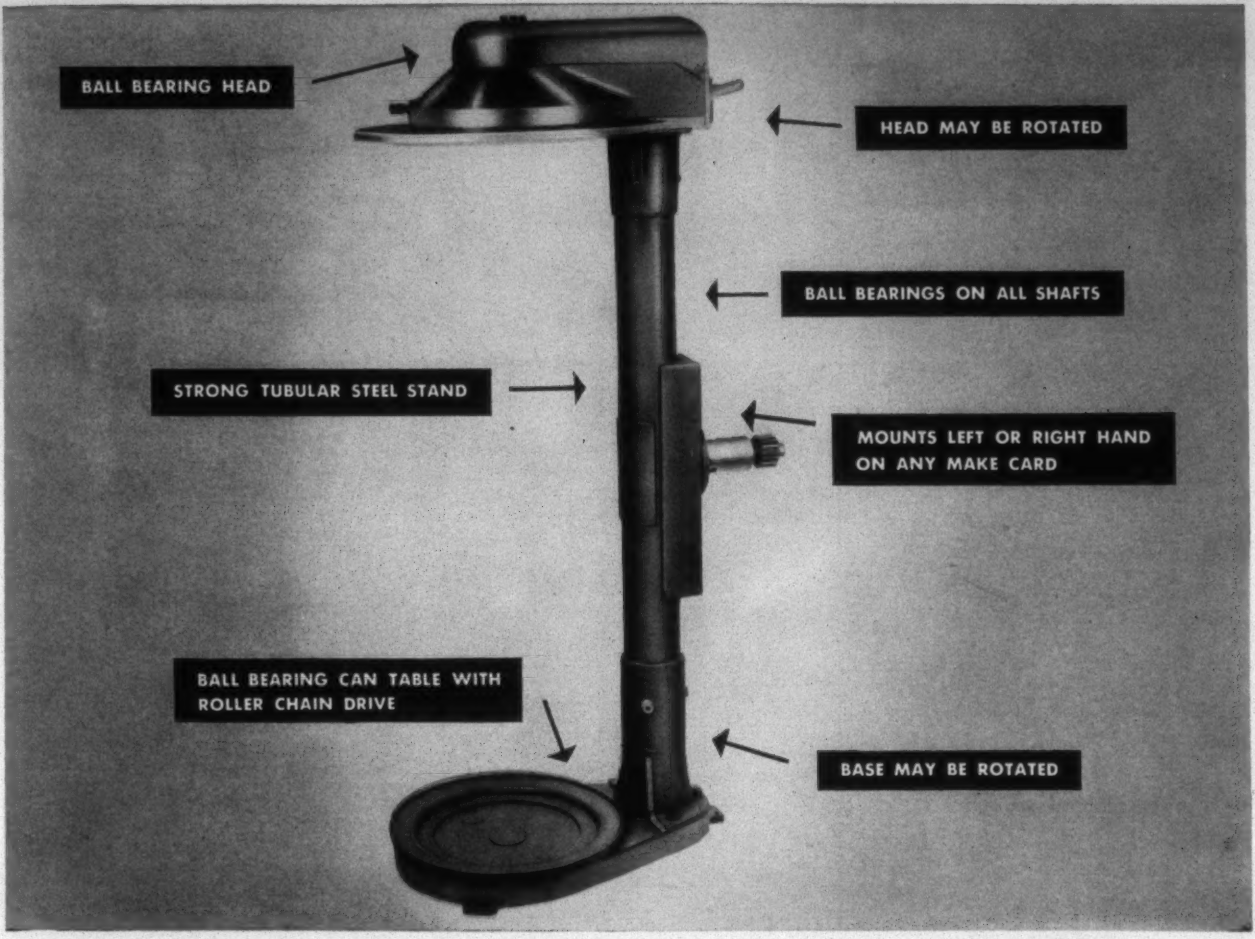
Hartford Spinning Spindle Introduces New Brake



Spinning spindle has brake integral with split base (Hartford Machine Screw Co.)

A new spinning spindle, featuring a sturdy new brake integral with the split base, is being introduced by Hartford Machine Screw Co. The spindle itself follows the well-known design on Hartford Machine Screw spindles—with 2 prelubricated ball bearings that need no greasing for an estimated 5 years, and with the base of split construction which makes the spindle economical to manufacture.

Into this base is cast the bracket supporting the brake. All the parts of this brake are


BALL BEARING HEAD
HEAD MAY BE ROTATED
BALL BEARINGS ON ALL SHAFTS
STRONG TUBULAR STEEL STAND
MOUNTS LEFT OR RIGHT HAND ON ANY MAKE CARD
BALL BEARING CAN TABLE WITH ROLLER CHAIN DRIVE
BASE MAY BE ROTATED

HERE IS SOUTHERN STATES' NEW COILER WITH EVERY FEATURE MILL MEN WANT

The Southern States line of Coilers and Conversion Units has been vastly improved. Every engineering and operating feature desired by mill men has been included.

Now mills can profit by a coiler that will operate at peak efficiency, require a minimum of maintenance, and provide years of trouble-free service.

These streamlined, compact, premium-quality coilers are designed for direct attachment to any make of card, left or right hand. Installation is rapid and economical.

It will pay you to get complete information and find out how these improved Southern States Coilers and Conversion Units will profitably improve your operations.

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- **Cut tooth gears throughout**
- **Self-aligning pillow blocks on upright shaft**
- **Self-aligning pillow blocks on calendar roll shaft**
- **Precision-ground cast iron calendar rolls**
- **Fully adjustable can table**
- **Quickly detached coil spring roll-loading device**

WRITE FOR TECHNICAL BULLETIN No. 203-b

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generous in size, thus providing unusual strength, Hartford points out. Large size also features the brake works by cam action, which is said to be simple, reliable and positive. Just as important is this brake's positive lock that positively holds the shoe away from the spindle, out of service, until needed. Just a touch on the brake lever sets the brake and the operator has both hands free. (Request Item No. J-5)

Emkay Sequestering Agent

Availability of Emkasene, a new organic sequestering and chelating agent for control of hard water and trace metal ions, has been announced by Emkay Chemical Co. A balanced product, Emkasene is effective in a wide variety of textile processing operations, Emkay reports. Especially useful in wet processing, Emkasene can be used in boiling, bleaching, dyeing, stripping and finishing operations. It corrects many conditions that cause dull shades, high bleaching cost, rust stains, low color yields, finish yellowing and rancidity. Emkasene is a synergistic blend of amino, carboxylic acid. It is effective over a wide pH and temperature range, is odorless, stable in storage, easy to handle, and cold water soluble in all proportions. (Request Item No. J-6)

Skein And Swatch Dryer

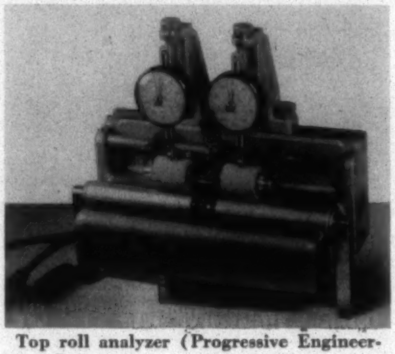
An improved skein and swatch dryer has been developed by Proctor & Schwartz Inc. The new dryer, for drying sample skeins of yarn and swatches of cloth which can be hung over poles or placed on trays, has been designed principally for use in dyehouses, needing to simulate conditions similar to actual production drying. It is also suitable for use by research laboratories. A direct motor driven fan circulates steam heated air in the standard unit. The dryer may also be supplied with electric heat source. (Request Item No. J-7)

Leather Aprons Impregnated With Chemigum Latex

Greater savings are reportedly being effected in high draft spinning operations through the use of leather aprons impregnated with Chemigum latex, a butadiene acrylonitrile copolymer produced by the chemical division of the Goodyear Tire and Rubber Co. Treatment with latex has increased serviceability of the aprons to more than 2 years when used with a 72-lb. top roll weight with .067-inch hank roving. Savings of 25% to 50% have been realized because of the extended service life of the aprons and the reduced need for replacements. Leather aprons which have not been treated wear out completely in as little as 4 months, Goodyear points out. Greenwood Leather Co. manufactures these products which are known as "long draft aprons."

Chemigum latex imparts increased resistance to abrasive wear and provides a tough surface on the leather. An internal cushioning effect also results from the impregnating characteristics of the latex. The wear and cushioning qualities of the aprons prevent loss of thickness in the traverse area when used in high draft processing. The aprons are used on spinning frames to control movements of either natural or synthetic fibers as they are being drawn. Running yarns that are difficult to handle is made easier with the latex impregnated aprons because surface cracking is eliminated at all stages and the aprons provide cleaner running in the spinning operations. Run continuously, they exert a light controlling grip on the fibers and assist in producing a more even drawing action which results in stronger and more uniform yarns. (Request Item No. J-8)

Top Roll Analyzer



Top roll analyzer (Progressive Engineering Co.)

Progressive Engineering Inc. has announced the development of an instrument designed to help roller shops maintain top rolls, both anti-friction and solid, in peak operating condition. The instrument is called a top roll analyzer and, according to the manufacturer, it tells at a glance, with absolute accuracy, the exact condition of top rolls as they are under actual operation. The instrument analyzes taper, run-out, diameter and smoothness of operation. Being both simple to operate and to read, it completely eliminates guesswork as to the exact working condition of top rolls and enables mills to insure their rolls being in peak quality-production efficiency. (Request Item No. J-9)

Neutrazoic Dyestuffs

Neutrazoic dyestuffs, a new range of azoic colors designed for use with the Riegel Flash-Acid Ager, have been announced by the Atlantic Chemical Corp. Use of Atlantic Neutrazoic dyestuffs with the Riegel Flash-Acid Ager represents the greatest advance in high-speed, fast-color cotton printing since the development of stabilized azoics and pigments more than 20 years ago, the manufacturer states. Chief benefits of the new dyestuffs are increased speed and reduction of seconds, which enable processors to make significant savings while producing prints of high durability.

Atlantic Neutrazoic dyestuffs, products of Atlantic Chemical Corp. research, are naphthol-salt combinations stabilized through the use of special compounds which develop almost instantaneously in the Riegel Flash-

Acid Ager. The Riegel Flash-Acid Ager is a small, low-cost, compact machine, invented and used by the Riegel Textile Corp. (Manufactured by Sims Metal Works of West Point, Ga.) Geared to the take-off end of the print machine dry cans, it operates at all printing speeds.

Atlantic Neutrazoic dyestuffs and the Riegel Flash-Acid Ager together create new printing procedures in which the material is printed, can-dried, Riegel Flash-Acid Aged and swung into boxes at full speed, in one continuous operation. Immediate inspection can be made at the doffing end of the print machine. And washing, which is optional, can be performed without concern for bleeding, since Atlantic Neutrazoics are faster to washing than ordinary stabilized azoics. Atlantic Neutrazoics dyestuffs are available as a complete range in standard strengths and azoic shades as solutions, double solutions and powders. No formula changes are required from presently used stabilized azoics. For samples and literature, use this magazine's reader service request card. (Request Item No. J-10)

Dimethyl Hydantoin Formaldehyde Resin

Dimethyl Hydantoin Formaldehyde (D.M.H.F.) resin used in textile sizing is being produced on a tonnage basis by Glyco Products Co. Inc. It is a water-white resin having an initial softening point of approximately 60° C. It dissolves readily in water giving solutions of low viscosity at high concentrations. It is soluble in alcohols, esters, ketones, chloroform and methylene chloride. It is insoluble in aromatics, ethers, trichloroethylene and carbon tetrachloride. When blended with plasticizers, it deposits non-brittle films. It is compatible in all proportions with gelatin, dextrin, starch, polyvinyl alcohol and neutralized polymethacrylic acid. In certain proportions, it is compatible with sodium carboxymethyl cellulose, casein and zein. Samples and a bulletin describing D.M.H.F. resin can be obtained by using this journal's reader service request card. (Request Item No. J-11)

Wica Phosphorylamide

A new concept in permanent flameproofing of cellulose fibers has been announced by Wica Chemicals Inc. Wica Phosphorylamide is applied in cold padding operations and simply dried and cured at 290° F. Wica points out that cellulose and Wica Phosphorylamide combine without the use of added catalysts or special conditions, and the high versatile material does not offer the problems heretofore encountered in permanent flameproofing.

According to the company, an unusually wide variation of circumstances and additives have been employed, and all indications point to an almost unlimited degree of compatibility with other finishes and auxiliary chemicals. Solutions as dilute as 4% have been shown to suffice and concentrations up to 20% have been used without drastically affecting the handle of the impregnated fabric upon after-rinsing in cold water. Pile fabrics, flannels, velveteens,

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drills, ducks, canvases and uniform twills respond easily to treatment, it is said. Drapes and other decorative fabrics with appreciable cellulose content are targeted for immediate interest and Wica Phosphorylamide is being considered for flameproofing cellulosic paper and paper board products.

The antistatic properties of Wica Phosphorylamide-treated fibers are being investigated, and its compatibility with a multitude of water repellents, lubricants, softeners, builders, thermosetting and the thermoplastic resins is credited for much interest and enthusiasm in the industry's long search for a much needed tool in these fields of specialty processing. A special department has been created at Wica Laboratories for the handling of technical problems, sampling and development of this new, unique flame retardant. Wica Phosphorylamide is marketed as a 50% solution. (Request Item No. J-12)

Protolube PE

Proctor Chemical Co. Inc. has announced the development of Protolube PE, an emulsified polyethylene. It is said that Protolube PE when used in conjunction with thermosetting resin finishes imparts a durable plasticization to the resins that reduces needle cutting, improves crease resistance, abrasion resistance and tear strength. It is also claimed that Protolube PE has exceptionally good resistance to yellowing when exposed to high temperatures. The durability of Protolube PE gives the finisher the opportunity of producing resin-treated fabrics that will retain their initial desirable properties after washing or dry cleaning. It is also said that Protolube PE has excellent compatibility with all catalysts used with thermosetting resins. (Request Item No. J-13)

Caprolan Nylon Heavy Yarns

Allied Chemical & Dye Corp. has increased to 13 the number of Caprolan nylon heavy yarns now in commercial production. Caprolan heavy yarns were introduced to the trade last year and established on a commercial basis early in 1956. The new list of heavy yarn deniers includes:

Denier	Filament	Turn/in.	Twist	Type	Package
2100	408	0	0	HB	Paper Tube
2100	112	0	0	HB	Paper Tube
2500	408	0	0	HB	Paper Tube
2500	112	0	0	HB	Paper Tube
3360	544	0	0	HB	Paper Tube
3360	168	0	0	HB	Paper Tube
4200	680	0	0	HB	Paper Tube
4200	224	0	0	HB	Paper Tube
5000	816	0	0	HB	Paper Tube
5000	280	0	0	HB	Paper Tube
7500	1224	0	0	HB	Paper Tube
10,000	1632	0	0	HB	Paper Tube
15,000	2448	0	0	HB	Paper Tube

Caprolan heavy yarns are a new class of high tenacity nylon yarns which are easy to dye and are completely versatile in their applications. These yarns lend themselves to the new bulking processes and are recommended for use in upholstery fabrics, draperies, carpets, tufted goods and other end uses where color and durability are important. In addition, Caprolan heavy yarns are finding acceptance in industrial fabrics and mechanical goods where high impact strength and added toughness are essential. Caprolan heavy yarns have found acceptance in webbings, conveyor belt fabrics, nettings, rope, cord, seine twine, braids, tapes and similar uses. (Request Item No. J-14)

Scott Elongation Tester

Scott Testers Inc. has announced the development of the Model CET tester designed to test for tensile, hysteresis and compression within the range of 0 to 2,000 lbs. The new tester is a constant-rate-of-elongation tester with a broad range of speeds up to 40" per minute, lengths of stroke up to 72", and infinitely variable loading between 0 and 2,000 lbs. The electric weighing system is the most precise known (accuracy within 0.25%), being free from inertia and accurate at all stages of the test cycle, the manufacturer points out. The system permits the most detailed analysis of the specimen under test.

Stretch of the specimen can be magnified on the chart up to 200 times actual. A selected significant portion of the stress-strain curve can be isolated and shown full span on the chart, magnified up to 10 times. Specimen elongation is effected by downward motion of the lower crosshead, driven

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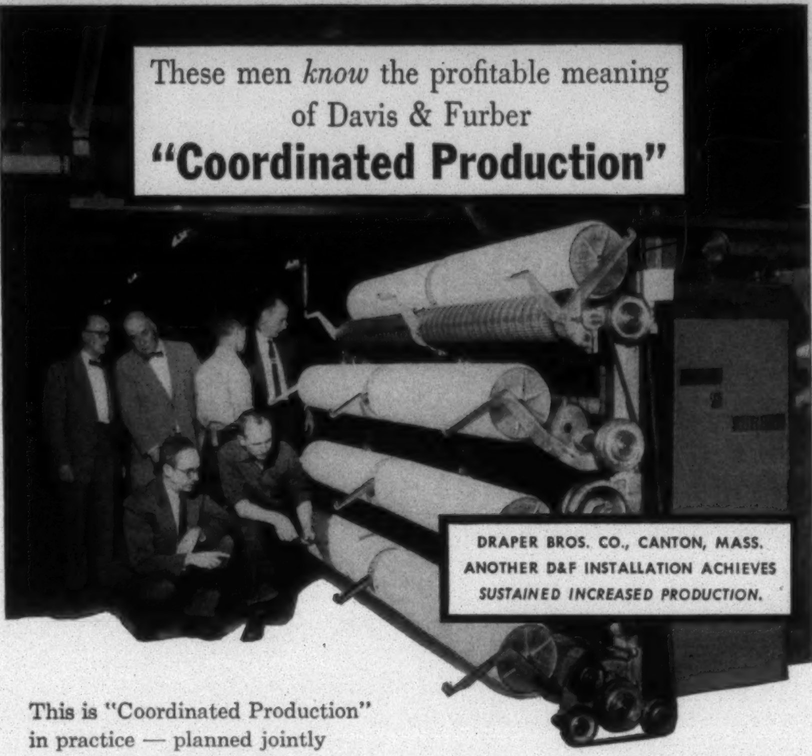
by double screws operating in "ball nut" housings. Compression testing is accomplished by the same action of the machine, with the specimen in a fixture which exerts compressive force and has a capacity for specimens 15" square up to 20" high. For hysteresis (fatigue) testing, the cyclic action of the lower crosshead may be actuated manually, or may be set to continue downward and reverse cycle automatically, with instantaneous change of direction at bottom and top stroke. Maximum emphasis is placed by the manufacturer on the ability of the CET tester to handle an endless variety of materials with extreme flexibility of loads and speeds, and to manipulate the recording system so that the critical areas of reaction are segregated, magnified and picturized in minute detail and with utmost clarity for study of their fullest significance. An attractive brochure and further details can be obtained by using this journal's reader service request card. (Request Item No. J-15)

Universal Steam Trap

Steam trap designed for unit heaters (Perfecting Service Co.)

Perfecting Service Co. has announced that a new, small, lightweight bucket-type steam trap for unit heaters, small processing machinery and like applications is available in ½" pipe size, with a universal pressure range from 0 to 125# p.s.i. Developed for low pressure-high condensate rate applications where a smaller and inexpensive trapping unit is needed, the new trap reportedly embodies all the outstanding features of the Unitrap line of steam traps. According to the manufacturer, this line of traps is completely universal in pressure application, with faster warm-up, less wear, lower maintenance and capable of handling more condensate per hour without steam loss, manufactured in pipe sizes from ½" through 2".

The trap operates on a balanced pressure principle through the unique function of its new and exclusive Dual-valve, which automatically compensates for differential pressures through a range of 0 to 250 lbs. p.s.i. The Dual-valve permits all Unitraps to operate through fluctuating steam pressures and variable condensate rates within range of the traps without changing orifice size or bucket weights. Its extra large orifice



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The SECOND step toward "Coordinated Production" is the special adaptation, when necessary, of new equipment to your specific requirements by D&F design engineers, or the modernizing of existing equipment to meet present needs.

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Helpful facts for mill managers, superintendents, overseers. Monthly D&F NEWS — copies on request.

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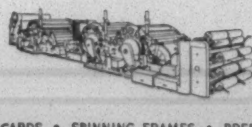

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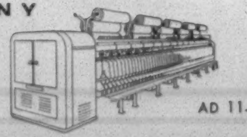

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achieves tremendous discharge capacities (at 250 lbs. pressure p.s.i.) ranging from 3,500 lbs. per hour in the ½" to 55,000 lbs. per hour in the 1½" and 2" traps. These greater capacities are one of the outstanding features. This factor also results in faster warm-up. The positive seating of the valve prevents wire draw and loss of steam. These unique features take the "guess work" and engineering out of ordering steam traps to meet each trapping problem, Perfecting points out. It is only necessary to specify pipe size when ordering. Its universal range reduces trap inventory.

(Request Item No. J-16)

Penfield Demineralizer

Penfield Mfg. Co. has announced a new, fully automatic, multi-column demineralizer, called the LA-1000 unit, designed to effectively remove free CO_2 and silica and provide an effluent of exceptionally high purity. The new unit, which operates on multi-column ion exchange principles, passes the raw water through 4 columns—2 each, alternately, of cation and anion resins. The third and fourth columns remove the weaker ionized impurities that may have passed through the first cation and anion columns.

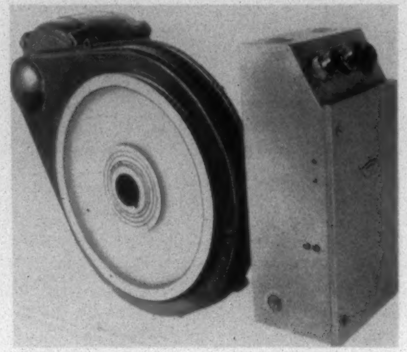
All operating functions are automatic. When the effluent's purity falls below the desired standard originally set by the operator, the unit automatically stops delivering treated water and the need for a regeneration cycle is signalled. The regeneration cycle is initiated by setting 1 switch and completes itself entirely automatically, including rinsing and recutting in the effluent when the pre-set standard of purity is attained.

The columns of the new unit are rolled steel, butt welded, 100% plastic lines. Underdrain system consists of perforated stainless steel plate on top of which a plastic screen rests. This system produces excellent distribution results and eliminates the necessity of space-consuming distribution media, Penfield points out. Regenerant piping includes non-corrosive eductors, non-corrosive valves, and plastic draw-up lines for both acid and caustic regenerants. Process piping is 150-lb. bronze pipe for all raw water lines, stainless steel or plastic on all effluent lines. (Request Item No. J-17)

Nonionic Softener

Emersoft 7700, a new high-quality nonionic softener for textile finishing is now available from the organic chemical sales department of Emery Industries Inc. Not only does it provide softness at a low cost per yard, Emersoft 7700 also offers substantial quality advantages for such varied cottons as broadcloth, twill, denim and ticking. The versatility of Emersoft 7700, including its stability over a wide pH range, permits its use in all cotton softening applications. The product is a 95% active paste that is easily dispersible in warm water. Shipment is made in 55-gal., open head, non-returnable drums, in quantities up to and including carloads. For descriptive literature write for Technical Bulletin No. 407, titled *Emersoft 7700*. (Request Item No. J-18)

Electric Clutch Card Drive



Individual card drive (Precision Gear & Machine Co.)

Precision Gear & Machine Co. reports that it has developed a revolutionary new concept in operation and design of an individual card drive. The company points out that this individual drive completely eliminates all over-head shafts, motors, pulleys and belting in the card room, doing away with line maintenance and unnecessary downtime due to line shaft belting failure. The new drive employs an electric clutch and a positive timing belt. Smooth, easy starts are made by simply turning the rheostat on the control box. The drive gradually builds up speed without jerking or overloading. The card drive is a package unit, including motor, drive and control box ready to install. It mounts directly onto the card cylinder shaft and requires only a simple electrical connection. (Request Item No. J-19)

Clayton Generator

Clayton Mfg. Co. has announced that its forced-circulation generator with the revolutionary balanced-feed design is now available in greatly increased horsepower rating. Formerly offering a normal rated boiler horsepower of 15, these models are now also obtainable with a 30 h.p. rating. Maximum horsepower has also doubled, from 16.5 to 33 h.p. Normal b.t.u. output at 33,475 b.t.u. per h.p. therefore becomes 1,004,250 in normal operation. Normal steam output is 1,035 lbs. per hour. These steam generators are designed with a pressure of 200 lbs. per square inch.

(Request Item No. J-20)

Tape Dispensers

A new series of fully automatic air-operated tape dispensers has been announced by Air Fixtures Inc. Four models are included in the series. Model AFET-822 handles filament glass fiber, cloth, heavy paper, plastic film, cellulose and acetate fiber tapes in widths up to 4", lengths up to 21", and maximum tape roll diameters of 9". Model AFSS-92 is for cellulose or acetate tapes in widths up to 1", lengths up to 5½", maximum roll diameter 5½". Model AFSS-852

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is for filament, glass fiber, cloth, heavy paper, plastic film, cellulose and acetate fiber tapes in widths up to 2", lengths up to 12", maximum roll diameter 7½". Model AFAT-802 is for filament glass fiber, cloth, heavy paper, plastic film, cellulose and acetate fiber tapes in widths up to 2", lengths up to 21" and maximum roll diameters up to 9".

All 4 models are fully automatic, eliminating all push buttons, levers and foot pedals. When the operator removes a length of tape, a micro switch automatically sets in motion the next delivery cycle. Four types of controls are available—foot valve-air mechanical, solenoid air valve with switch, air time delay and electric time delay.
(Request Item No. J-21)

Fiber Softeners

Richmond Oil, Soap and Chemical Co. has developed three new softeners for use with natural and synthetic fibers. Richsoft 1434, an anionic softener, is designed to give a softening effect on cotton, and is compatible with urea. Richsoft 1439 and 1460 are cationic softeners. The former gives a permanent softening effect on rayon, viscose, acetate, nylon, Dacron, Orlon or cotton and is said to be particularly effective on Ban-Lon. The latter is designed for Orlon, viscose, acetate, nylon, Dacron, wool and cashmere. All three will not become rancid in storage, and are stable softeners that will not separate on standing. All three show good resistance to yellowing at high temperatures. Richsoft 1460 gives a good waxy hand since it contains lanolin esters, while the Richsoft 1439 imparts a drier full hand. (Request Item No. J-22)

Nalco Imidazolines

Nalcamine is the trade name of a group of imidazolines—cyclic tertiary amines of high molecular weight—now being marketed by National Aluminate Corp. Nalco manufacture of tertiary amines is not a new venture, but production has previously been absorbed for use in several of the company's specialized chemic products. New production facilities and development of new manufacturing techniques enable sale of the chemicals to other users.

Imidazolines (glyoxalidines) have been called "all-purpose" chemicals because of the extremely wide range of uses their characteristics make possible. Reacting on an equimolar basis to form cationic surface-active salts, they are used as emulsifiers, demulsifiers, dispersants, wetting agents, plasticizers, water repellants, anti-static agents, corrosion inhibitors and solvent penetrants. Salts, soluble in either water or oil systems, or a balance between, are practical and commercially feasible with Nalcamines, it is pointed out. The high purity and uniformity achieved during several years of Nalcamine production show that these qualities can be closely controlled at manufacturing costs appreciably below those previously considered reasonable. Thus Nalco believes the new products offer both performance and price advantage that will substantially increase the commercial utilization of the imidazolines. (Request Item No. J-23)

add to your PROFIT from production savings!

LOW OPERATING COST

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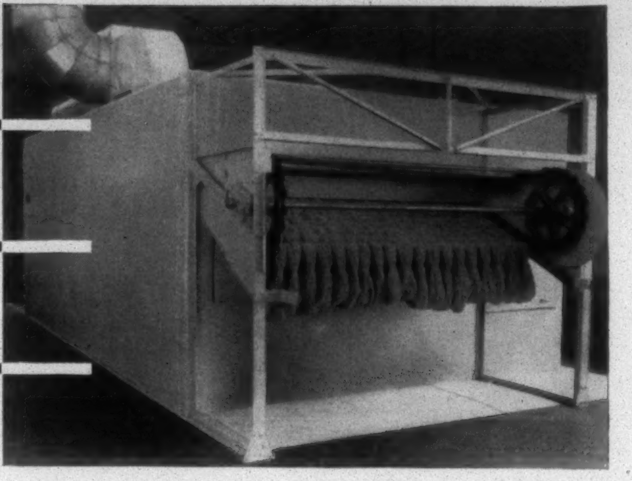
IMPROVED HOUSING

RAPID DRYING



Proctor Automatic Skein Yarn Dryer with Two-Way air circulation, drying dyed carpet yarn.

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Regardless of your output, there is a Proctor Yarn Dryer with the right capacity to make your drying profitable. Truck Dryers for skeins and cakes, or Automatic Dryers for continuous operation, both feature controlled air circulation to provide the *greatest drying uniformity obtainable.* Cotton, wool, silk, or synthetics can be dried at fastest possible rates—show substantial savings in time, labor, and steam requirements. And, as with all Proctor equipment, you can depend on performance guaranteed in terms of the finished product produced. Investigate these profit opportunities now—write today for latest information bulletins.

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WRITE FOR DETAILS

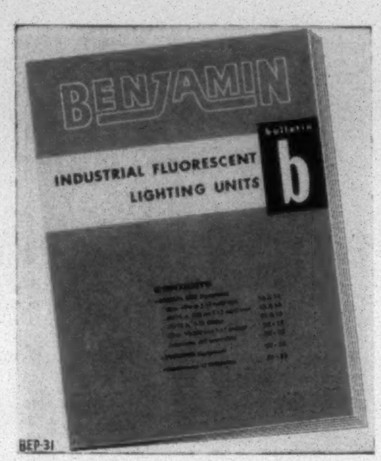
Proctor

PROCTOR & SCHWARTZ, Inc.
Philadelphia 20, Pennsylvania

Manufacturers of Textile Machinery and Industrial Drying Equipment

For the Mill Bookshelf

Fluorescent Lighting Units



Publication of a new, 36-page *Bulletin B*, containing descriptions, illustrations and lighting data on 394 Benjamin industrial fluorescent lighting units, is announced by Benjamin Electric Mfg. Co. According to the company, the new bulletin answers a definite need for concise, up-to-date information on the wide range of Benjamin units used today, including such advanced equipment as 25% upward light units and systems utilizing the new higher-output 800 ma. fluorescent lamps. Among the units listed, the reader will find a lighting system for the proper illumination of all types of work areas. A new, easy-to-follow arrangement speeds up and simplifies reference according to reflector types, lamp types, accessories, construction and lighting data. For additional convenience, a separate section at the back of the bulletin contains a tabulation of coefficients of utilization for 22 of the most popular Benjamin industrial units.

(Request Item No. J-24)

Hinnekens Machinery Catalog

The Hinnekens Machine Co. Inc. has made its new extensive 60-page catalog of textile dyeing and finishing machinery available to the trade. Featured in the catalog are such Hinnekens machines as the continuous boil-off, dye beck, jigs, calenders, and embossing machines. Illustrated with photographs and blue-prints, this catalog enters into the construction and functional features of the Hinnekens products.

(Request Item No. J-25)

Stran-Steel Building Line

A colorful catalog detailing Stran-Steel Corp.'s newly enlarged line of industrial buildings and accessories has been published by the corporation. Prominently featured in the large, illustrated brochure are Stran-Steel's completely new series of rigid frame structures, two 50 and 60 ft. bow string truss buildings and the recently developed Stran-Satin metal wall. The new rigid frame buildings are available in widths of 32, 40, 50, 60, 70 and 80 ft., or multiples of those widths, in bays 20 ft. long. Contained in the catalog are attractive illustrations of these quickly and easily erected buildings in use as manufacturing plants and warehouses.

Stran-Satin metal wall, an exclusive Stran-Steel product, gives a "luxury look" to the new building line, according to the catalog. The new wall has a soft, pleasing luster and a strong modern rib design. Available in panels 3 ft. wide, the walls run in unbroken lengths from the eave line to the ground. Self-tapping screws with neoprene gaskets, another newly-introduced accessory, provide a weather-tight seal between the Stran-Satin panels and the building framework.

The bow string truss structures, 50 and 60 ft. wide, are available in 16 ft. bays. Multiples of these buildings may be had with either 16 or 32-ft. interior column spacing. Wall construction is optional; steel sheeting is standard, but brick, cinder-block and other similar materials may be used. Side-walls are non-bearing and may be eliminated entirely. The exclusive double-wall construction of these buildings provides insulation plus a vapor barrier which facilitate efficient heating or air conditioning.

Close-up details of various accessories for the buildings are presented in the catalog. An attractive new weather-tight steel fascia flashing completely encloses the gables and eaves of the rigid frame structures and also seals peaks and ridges. New Stran-Lite windows of translucent reinforced plastic sheets of the same rib design as the metal wall may be installed in walls or roofs. Walk-in or drive-in doors in popular sizes and styles are available.

(Request Item No. J-26)

Batch Control Catalog

Fischer & Porter has published a new catalog describing its batch control systems. These systems offer simple, dependable means for automatically adding a predetermined volume of fluid to a batch process. Copies of the new catalog, No. 91-109, are available on request.

(Request Item No. J-27)

Lubricant Testing Machine

A new testing machine for lubricants is described in Bulletin 106, issued by The Alpha Molykote Corp. The equipment is designated Model LFW-1 and is designed to test both bonded coatings and liquid lubricants. In operation, a stationary rectangular block is pressed with a predetermined load against a rotating Timken ring. Resulting friction is indicated throughout the test by a dial indicator and a counter counts the number of revolutions of the specimen. Tests are based on either the reaching of a pre-selected friction maximum, or the reaching of a pre-selected temperature value. In the bulletin the equipment is pictured and its operation is diagrammatically visualized. Complete specifications in both the English and Metric systems are included.

(Request Item No. J-28)

Alvey Conveyor Systems

Mills on the Move, a new bulletin issued by Alvey Conveyor Mfg. Co., describes in detail new techniques of modern package handling and the role engineered textile conveyor systems play in increasing efficiency and cutting costs. The 8-page bulletin is illustrated with many photographs showing how specific mill operations such as the conveying of bales, rolls, doff boxes, cases and cuts are performed faster when tedious and costly man-handling is eliminated. Powered and gravity conveyors are shown at work in lifting, carrying, packing, strapping, storing, warehousing, and dock loading and unloading operations.

(Request Item No. J-29)

Distribution Systems For Bijur Lubricators

Distribution systems for all types of Bijur automatic lubricators are described and illustrated in a 2-color, 12-page brochure, Bulletin 4A, now offered by Bijur Lubricating Corp. The bulletin describes the detailed planning of all systems and their many applications to a wide range of machinery. Following a system from oil reservoir to lubrication point, the booklet tells how and where to obtain the best results from any system. Reservoirs, tubing, fittings, junctions and meter-units are discussed in separate sections of the bulletin. Other sections deal with such matters as analysis of oil distribution and how systems are engineered to provide the correct oil film to individual lubrication points. Drawings and photographs illustrate components of the systems, schematic layouts of systems and actual installations. (Request Item No. J-30)

Chainless Mercerizing Machine

Two new bulletins offered by H. W. Butterworth & Sons Co. provide complete information on the Benninger chainless mercerizing machine for piece goods. This machine utilizes the principle of tension mercerizing developed by Benninger during the past 20 years. Bulletin 711-E contains a cross-sectional flow diagram of the machine, together with a detailed description of each stage of the chainless mercerizing process. This is the process which permits simultaneous treatment of 2 or 4-fabric layers, elimination of the necessity for stretching, and gentler treatment of fabrics.

Close-up photographs of many of the special features of the machine demonstrate the unique design characteristics which contribute to operating efficiency and which permit continuous control of fabric lengths when running through several compartments of the machine. Included also are schematic drawings of the 5 machine sizes, a table of cloth passage possibilities, with various arrangements of cloth strips. Pamphlet 558-E provides a complete, illustrated answer to the question, "What is chainless mercerizing?" Both bulletins are available on request. (Request Item No. J-31)

Organic Chemicals

More than 335 organic chemicals are described in a new 24-page booklet issued by Carbide and Carbon Chemicals Co., a division of Union Carbide and Carbon Corp. Condensed data on applications are presented and physical properties are given in tabular form. An alphabetical index is included for the convenience of the user. The 1957 edition of *Physical Properties of Carbide and Carbon Chemicals* features 21 new products. For easy reference, chemicals are arranged by family groups.
(Request Item No. J-32)

Bulk Handling & Storage Of Hydrogen Peroxide

Detailed information on new equipment and simplified handling methods for storing bulk quantities of hydrogen peroxide is available in a new booklet offered by the Solvay Process Division of Allied Chemical & Dye Corp. Entitled *Bulk Storage of Hydrogen Peroxide*, the booklet includes data on construction and size of storage and measuring tanks, hose, piping and air compressor systems, valves, pumps and gaskets. It is illustrated with detailed drawings of the equipment and typical air and gravity transfer systems. Also included is a partial listing of names and addresses of equipment suppliers. (Request Item No. J-33)

Nonionic Softener

Emersoft 7700, a new nonionic softener, is described in an 8-page booklet offered by Emery Industries Inc. The booklet, available upon request, lists properties and test procedures for the product, as well as application data for use in the finishing of most cottons. (Request Item No. J-34)

General Data and Physical-Chemical Properties of Arnel

Properties of Arnel triacetate yarns and fibers, together with types of filament, staple and tow being produced, are reviewed in technical bulletin TD-12A now available from the textile division, Celanese Corp. of America. The 16-page bulletin, entitled *General Data and Physical-Chemical Properties of Arnel*, presents new findings on electrical properties of Arnel with particular reference to resistivity as applied to industrial uses. Strength and elongation properties at various temperatures ranging from 68° to 446°F., and effects of dry heat aging are also presented. Information on chemical

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It costs nothing to find out if your present equipment is handling your fibers efficiently—and it may prevent poor work, insufficient cleaning, waste, and lost production.

Surveys made by Dodenhoff engineers show that the aprons on over 30% of today's opening equipment are out of date. In many cases, only simple changes of pin sizes or slat respacing were necessary. Call on Dodenhoff for a free check-up on your equipment. And for opening equipment and aprons of unmatched efficiency, always call on Dodenhoff first.

New and reworked Textile Aprons **Beater Slats**
Waste Machine Cylinders **Kirschner Beaters**

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resistance to Arnel is shown together with analytical procedures for separating Arnel from other fibers.

(Request Item No. J-35)

Pallet Shipment Data

A new pamphlet describing standard pallet shipments of Avisco cellophane is being distributed nationally to all customers of the film division of American Viscose Corp. This handy pamphlet contains charts of available pallet sizes for roll and sheet cellophane. Avisco claims that more efficient handling of cellophane will result with the use of the new standard pallets and points specifically to ease of handling and space saving. There is no additional charge for palletizing. (Request Item No. J-36)

How to Engineer Corrugated Boxes

Useful information on designing efficient corrugated boxes is contained in a revised edition of *How to Engineer Corrugated Shipping Boxes*, published recently by Hinde & Dauch. The 24-page book describes each step in the development of the modern shipper including study of the product to be packaged, original engineering, exterior box design, construction of a pilot box, and testing. The new edition, No. 8 in the H&D Little Packaging Library series, also lists important considerations preliminary to the engineering of a new box. Photographs illustrate the various stages in box development and show examples of properly-engineered shipping boxes.

(Request Item No. J-37)

H&D Packaging Booklet

What carrier regulations influence the shipment of your products? How do you determine the type and nature of your package? What specific kinds of corrugated board are available?

The answers to these and many other questions about corrugated boxes are found in the newly-revised edition of *How To Specify Corrugated Boxes*, another in a series of Little Packaging Booklets published by Hinde & Dauch. With up-to-the-minute information to help manufacturers do a more economical and efficient job of packaging, this new booklet provides a convenient check list to determine the specifications for better corrugated boxes. Illustrations point up the factual copy which details how correct box design can effect substantial savings.

(Request Item No. J-38)

Exact Weight Scales

The Exact Weight Scale Co. is offering a 4-page, illustrated booklet containing brief descriptions of a variety of specialized scales for the textile industry. Models are listed for such operations as color control, quality control, slashing, laboratory use, checkweighing, denier test and shipping. Each model is illustrated and bulletin numbers for more detailed information on individual models are listed. Copies can be obtained by using this magazine's reader service request card. (Request Item No. J-39)

Flexible Polyethylene Pipe

Ace Supplex flexible polyethylene plastic pipe and fittings are described in 8-page Bulletin CE-57 recently issued by the Supplex Co., a division of American Hard Rubber Co. Contents of the bulletin include: applications for Supplex pipe, sizes of standard pipe and fittings, installation instructions, technical properties, and estimated flow rates for water in various pipe sizes. A chart which lists many common industrial liquids—acids, bases, organic chemicals, and so on—and specifies which of these liquids may be carried in Supplex piping.

(Request Item No. J-40)

Applying Antifoam Agents

A new, illustrated 4-page folder describing different methods of feeding antifoam agents to batch and continous processes is available from Hodag Chemical Corp. Hodag manufactures specialized antifoam agents for use in a wide variety of industries. Application methods described in the folder range from simple manual feeders to complex automatic feeding systems. These antifoam application methods are generally adaptable to most manufacturing operations where foaming problems occur. All methods have been field-tested and proven to provide efficient foam control.

(Request Item No. J-41)

Quill Refinisher

Robert Reiner Inc. has published a 2-page data sheet on its new quill refinisher and degreaser. The literature points out that the unit is an entirely new machine with a 3-station processing cycle designed to give quills a perfect surface, clean grooves and a high luster without the use of harsh abrasives. The unit is designed to be fed directly from either a Model L or K Terrell stripping machine. Quills feed straight from the stripping machine into the polisher and are then automatically processed and ejected by a small conveyor. No operator is needed. Copies of the data sheet can be obtained by using this journal's reader service request card. (Request Item No. J-42)

Versa-Matic Drawing Frame

Saco-Lowell Shops has published a 28-page, detailed catalog on its new Versa-Matic drawing frame. The catalog contains a pictorial survey of the principal features and sub-assemblies of the new frame, along with a brief discussion on each of these features. Miscellaneous data included in the catalog discusses floor space requirements; power requirements; gearing diagrams; roll settings and drafts; and wiring diagrams.

The catalog cites these features offered

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The wide range of viscosities and the excellent weaving properties of Penford Gums make them desirable for warp sizing spun yarns. This includes combed cottons, viscose, viscose-acetate blends, hydrophobic fibers, blends of hydrophobic and other fibers, and worsted fibers.

Penick & Ford has a staff of Technical Sales Service Engineers to give advice as to where and how Penford Gums are best suited to your process and to your equipment.

(U. S. Patent Nos. 2,516,632; 2,516,633; 2,516,634)

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by the Versa-Matic: (1) compact modern frame designed for large cost-saving packaging; (2) 4 deliveries constitute a complete unit permitting flexibility of arrangement and high operating efficiency; (3) front roll delivery of 250 to 300 feet per minute under average mill operating conditions; (4) sliver regularity is equal to or better than that obtained from conventional frames operated at low speeds; (5) all rolls are driven independently; (6) has patented automatic self-cleaning top and bottom clearers with built-in static conductors; (7) electric stop motions in 5 positions for better control with indicating lights for increased efficiency; (8) regular mill runs show an efficiency up to 93%; (9) individual motor drive is equipped with brake for quick stops; (10) rigid unit construction of the all-steel chassis assures correct alignment and minimum maintenance; (11) smooth exterior contours reduce waste and fly accumulation and minimize cleaning; (12) has large jack shaft under the roller beam to transmit power to the foot-end gearing; (13) large diameter roll and intermediate gears prevent chatter, provide simple and easy adjustments and facilitate proper meshing; (14) anti-friction bearings throughout; (15) proven Shaw principle drafting elements can be 3 over 4 or 4 over 5; (16) advanced design over-arm spring weighting which guarantees accurate pressure; (17) lifting rolls and creels for 6 or 8 ends up; (18) anti-friction tube gears with new long-life, high-speed drive, eliminating all oiling; (19) advanced design turntables eliminate lifting at the doffing operation.

(Request Item No. J-43)

Laboratory Skein And Swatch Dryer

Proctor & Schwartz Inc. is offering a free bulletin (No. 416) on its laboratory skein and swatch dryer. The dryer is for drying sample skeins of yarn and swatches of cloth which can be hung over poles or placed on trays. It is used principally in dyehouses where it is desired to dry samples under conditions similar to actual production drying. Copies of the bulletin can be obtained by using this journal's reader service request card. (Request Item No. J-44)

Norcross Viscometer Measuring Elements

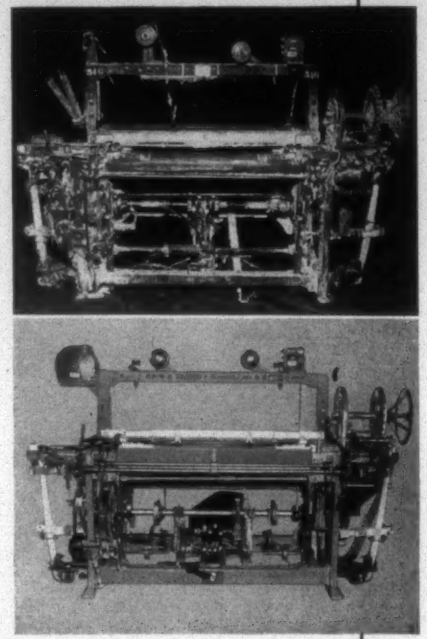
Norcross Corp., manufacturer of viscometers for viscosity process control, is offering a new bulletin, No. V-1216, covering its line of electric-pneumatic viscometer measuring elements for application directly in industrial processes. Models are available for measuring viscosity under various pressure conditions. The new measuring elements are applicable for measuring viscosities from .1 to 1,000,000 Centipoise and are for use with Norcross recorders and controllers.

(Request Item No. J-45)

Dictionary of Textile Terms

(Pergamon Press, 122 E. 55th St., New York 22, N. Y.; $10)

This book meets the need for a compre-



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Waste Screens
Special Machines
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hensive and up-to-date textile dictionary in German and English. Its aim is to provide a source for the current terminology in textile technology, industry and trade. It comprises the most widely used terms in the industry and allied trades, and in arranging the material the chief aims have been clarity and convenience, avoiding cross references as far as possible. On the assumption that users of the dictionary have a working knowledge of both languages concerned, no references are made to grammar, and only the genders of German substantives are indicated. In general British orthography has been used; specifically American terms are indicated.

Books For Management

The American Management Association, 1515 Broadway, Times Square, New York 36, N. Y., is offering the following publications: *Recruiting and Selecting Office Employees* by Milton M. Mandell (A.M.A. Research Report No. 27) 175 pps., $4.75. A.M.A. has surveyed 320 companies of every size to get useful information about job evaluation, recruitment, problems and pitfalls in selection, selection devices, recruiting and selecting special groups, and the selection of supervisors and managers.

Management and Taxes (Special Report No. 10) 127 pps., $3.75. This report is not designed to make tax experts out of general executives but rather to point out what to look for to avoid trouble spots in advance. It includes discussions of tax problems in purchasing, sales management and employment compensation.

How To Reduce Production Costs (Manufacturing Series No. 222), 88 pps., $1.75. This report discusses many important factors affecting manufacturing costs—plant layout, maintenance, traffic, accident prevention, automation, etc.

Some Technical Problems in Packaging (Packaging Series No. 50) 40 pps., $1.75. This booklet discusses specialized subjects in the packaging field and emphasizes company experiences with difficult packaging problems.

Company Approaches to Better Packaging (Packaging Series No. 49) 42 pps., $1.75. This report describes varying methods of increasing packaging efficiency.

Industrial Vision

(By Dr. Henry W. Hofstetter; Chilton Publications, Chestnut and 56th Sts., Philadelphia 39, Pa.; 188 pps., 61 ills.; $10.00)

This work points out that more than 80,000 persons in the U. S. have lost the sight of one eye as a result of industrial hazards, and nearly 8,000 have lost the sight of both eyes. Dr. Hofstetter, director of the division of optometry, Indiana University, gives a complete statistical analysis of vision and industrial efficiency to stress the importance of industrial vision.

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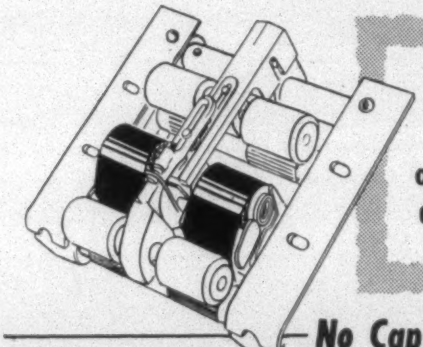

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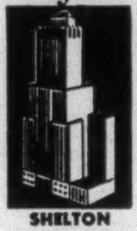

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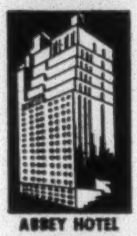
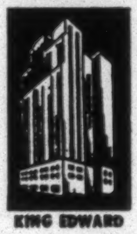


ABBEY HOTEL



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Statement of the Ownership, Management, Circulation, etc., Required by the Act of Congress of August 24, 1912, March 3, 1933, and July 2, 1946.

Of Textile Bulletin, published Monthly at Charlotte, N. C., October, 1956.

State of North Carolina

County of Mecklenburg

Before me, a Notary Public in and for the state and county aforesaid, personally appeared Junius M. Smith, who, having been duly sworn according to law, deposes and says that he is the General Manager of Textile Bulletin and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Acts of March 3, 1933, and July 2, 1946, embodied in Section 233, Postal Laws and Regulations, to wit:

That the names and addresses of the publisher, editor and general manager are:

Publisher, Clark Publishing Co., Charlotte, N. C.; editor, James McAden Jr., Charlotte, N. C.; managing editor, James McAden Jr., Charlotte, N. C.; general manager, Junius M. Smith, Charlotte, N. C.

That the owner is: Clark Publishing Co., Charlotte, N. C.; John W. Clark, Trustee, Concord, N. C.

That the known bondholders, mortgagees and other security holders owning or holding 1 per cent or more of the total amount of bonds, mortgages, or other securities are: None.

(Signed) JUNIUS M. SMITH,
General Manager.

Sworn to and subscribed before me this 8th day of October, 1956.

HENRIETTA Q. MONROE,
Notary Public.

(My commission expires September 11, 1958.)

Serving The Textile Industry

Goulston Co. Opens First Southern Office

George A. Goulston Co., manufacturer of fiber lubricants, has opened its first Southern office at 613 Calvert St., Charlotte, N. C. The Southern division will be managed by Harold S. Miller, formerly in the company's main office in Boston. He will be assisted by Ben and Arnold Goulston, sons of the president of the company. The firm operates manufacturing facilities in Scituate, Mass., producing wool, worsted and synthetic fiber oils.

Nemo Industries Named Agent For Belgian Firms

Nemo Industries Inc., Atlanta, Ga., has been named representative for 2 Belgian manufacturers, Callebaut-De Blicquy, manufacturer of all types of stainless steel dyeing equipment, and H. Duesberg-Bosson Fils, manufacturer of card clothing and textile leathers. According to Norman E. Elsas, Nemo president, his firm will be in a position to actively offer the products of these 2 manufacturers as soon as experienced salesmen can be obtained to cover the territory. Nemo is presently offering 2 of its own developments, the Nemo camera system and the Nemo jet cooker.

Continental-Diamond Announces Expansion

The Continental-Diamond Fibre Division of The Budd Co. has announced a $1,750,000 expansion of its Bridgeport, Pa., plant. The expansion will include the construction of a 65,000 sq. ft. addition, scheduled for completion in about 10 months. The new facility will result in the centralization of the entire sheet fibre making operations of the company under one roof, and a relocation of the vulcoid operation from a leased plant to the Bridgeport facility. Since The Budd Co. acquired Continental-Diamond as a wholly-owned subsidiary in July 1955, it has invested some $700,000 in improvements, including an expansion of the textile roving can department.

W. M. Hall & Sons Named Agent For Sheffield Corp.

W. M. Hall Jr.

W. M. Hall & Sons, cotton merchants and commercial fiber testing laboratory of Belmont, N. C., has been appointed exclusive sales and service representative for Sheffield textile gages in North and South Carolina and Virginia. Walter M. (Prep) Hall Jr. will head the organization's instrument sales division. The complete line of Sheffield gages on display in the Belmont offices of Hall will include both automated and manual models of the Micronaire gage for testing fiber fineness, the Precisionaire dye package density comparator, and the Neptel electronic yarn imperfection counter. Replacement parts will be stocked.

Gossett Appointed Collier Representative

Ralph Gossett & Co. of Greensboro, N. C., and Greenville, S. C., has been appointed exclusive representative in Virginia, North and South Carolina for the John W. Collier Co. Inc. of Providence, R. I. Collier offers specialized services to the textile industry for the repairing of spinning rings, cotton or worsted flyers and spindles.

Whitin Announces Plant Expansion Program

The Whitin Machine Works, Whitinsville, Mass., is launching an extensive plant expansion and modernization program involving a total expenditure of $4.5 million. Included in the program is the construction of a large new building and the enlargement of a second building in Whitinsville. These additions will increase the company's floor space there by about 94,000 sq. ft.

Construction is also being started on a new addition to the company's manufacturing plant at Charlotte, N. C. Added floor space will amount to 36,000 sq. ft. and will provide for increased textile manufacturing production in Charlotte as well as accommodating the roll manufacturing department which is being transferred from Whitinsville to Charlotte. This phase of the program is expected to cost $500,000.

The company is also opening a new sales and service office in Greensboro, N. C., in October. The new office will allow Whitin to give improved sales and service assistance

Stein, Hall & Co. Opens New Charlotte Facilities

Stein, Hall & Co. Inc. recently marked the official opening of its newly-constructed plant, office, laboratory and warehouse building at Charlotte, N. C., with special ceremonies attended by a number of company officials and guests. The new $500,000 facilities are situated on a 10-acre site on Glenwood Drive in Charlotte. The company's sales branch and laboratory staffs moved into the new facilities early in September, while initial manufacturing operations were started later in the mouth. Complete transition from the firm's former location at 1620-22 W. Morehead St. is expected to be completed by the end of October.

The structure is part of the company's over-all expansion program and is designed to meet a rapidly growing demand in the South for the firm's textile adhesive and resin products. Two modern, fully equipped laboratories are located in the new unit—the Southern textile laboratory and the resin laboratory. The former is responsible for development of new textile products and offers general technical assistance to textile mills in the South. The latter engages in research on Stein Hall resins for the textile and other industries.

Dave E. Truax, who has been with Stein Hall since 1936, is director of the Charlotte plant and laboratories. He was made laboratory manager in 1939, and has been in charge of the plant since 1952. Norman Nuttal is Stein Hall's Charlotte branch manager. He recently rejoined the company to assume this post after serving with the Hubinger Co. Armond P. Coppola, who engineered the construction and the moving and installation of all processing equipment for the new plant, will serve as plant manager, and J. B. Mathey serves as chief chemist in the textile laboratory.

New building of Stein, Hall & Co. on Glenwood Drive, Charlotte, N. C.

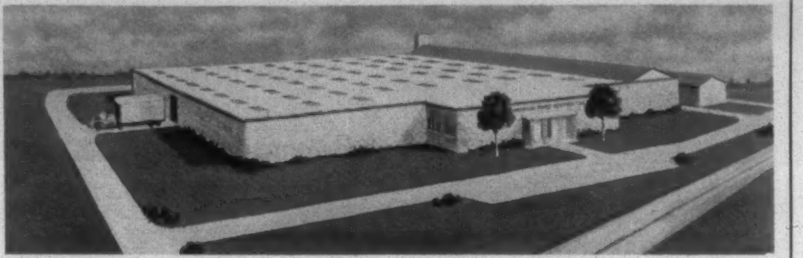
to customers in this area. Harry B. Patterson and Walton V. Byers of the Charlotte sales staff and Hurley G. Way of the service department will be assigned to the new office, located at 1828 Pembroke Rd. just off highway No. 220.

Whitin recently entered the business equipment field and now produces and markets an offset duplicator with necessary accessories and supplies. In addition, Whitin has entered into an agreement with American Type Founders Co. Inc., Elizabeth, N. J., to build an offset duplicator to be marketed and serviced by A.T.F.

The development of the expansion program will require the acquisition of many new highly specialized machine tools for setting up new manufacturing departments and the modernization of several others. The result will be a material increase in the company's manufacturing capacity and efficiency. Several departments and offices will be relocated and expanded.

Metro-Atlantic Builds New Dyestuff Laboratory

Metro-Atlantic Inc. has announced the construction of a new dyestuff application and service laboratory in Centredale, R. I. Equipped for the application and testing of dyestuffs, the laboratory's main functions will be standardization, application development and service. Some of the testing equipment will include standard Fadeometer, standard gas fading oven, printing machine, vat ager, acid ager, Dornbusch inlay printing and embossing unit, padder, dry cleaning and wash test equipment and stainless steel dyebaths. Adjacent to the laboratory will be a completely equipped physical testing and air conditioning room. Staffed by 4 dyestuff technicians under the supervision of Alfred McGregor, the activities of the laboratory will be directed by James Shore, technical director. Metro-Atlantic is the sales agent for Metro Dyestuff Corp., West Warwick, R. I., and for Farbwerke-Hoechst A. G., manufacturer of imported dyestuff specialties, West Germany.

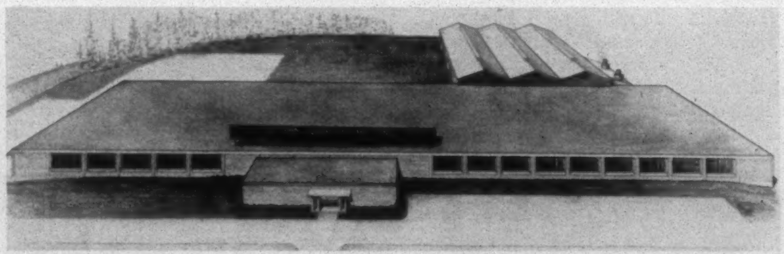


McDONOUGH FOUNDRY & MACHINE DIVISION of McDonough (Ga.) Power Equipment Inc. recently moved into its new 78,000 square-foot plant where the new facilities will be used to produce the McDonough universal card coiler and other textile equipment. The plant is equipped with an array of new precision machinery, according to John L. Sinback, vice-president of the parent concern and general manager of McDonough Foundry & Machine.

Du Pont To Build New Nylon And Orlon Plants

The Du Pont Co. has announced plans to build a new nylon plant in Richmond, Va., and a new plant to produce Orlon acrylic staple and tow at Waynesboro, Va. The multi-million dollar nylon plant at Richmond will be designed to produce 40 million pounds of fiber annually to meet the growing demand for nylon in tire cord and other industrial products. Work on the new plant, the company's fourth nylon producing facility, is expected to begin sometime late this year and plant startup is planned for the latter part of 1957. Du Pont now has a rayon plant in Richmond which employs 2,200 persons. Heavy denier, high tenacity nylon yarn, the type to be manufactured at the new plant, is also made by Du Pont at its Seaford, Del., and Chattanooga, Tenn., plants. Those plants also make textile nylon which is the exclusive product at Martinsville, Va. Nylon staple is made at Seaford.

The new Orlon plant at Waynesboro, rated to produce 40 million pounds annually, will bring Du Pont's capacity to produce Orlon staple and tow to over 100 million pounds yearly. The company's first plant for Orlon staple went into commercial production at Camden, S. C., in mid-1952. Orlon has been the company's fastest growing fiber, with sales now more than double the original 1952 capacity of 30 million pounds. It has become a major fiber in the knitwear industry, being used in making more than 80 million sweaters last year. It is now moving at an accelerated pace into such uses as blankets, women's coatings, dresswear, blouses, men's hose, suits, slacks, sport shirtings and children's outerwear. Work on the new plant is expected to begin late this year, with completion scheduled for late 1957. Du Pont has had an acetate plant in operation at Waynesboro since 1929.



SOUTHEASTERN LOOM AND MACHINE WORKS, a division of Abney Mills, is building a new, modern, one-story plant in Greenwood, S. C. An artist's conception of the new plant is shown above. Work has begun on the new building and the move from Greenville will be completed by Dec. 31. Daniel Construction Co. of Greenville is erecting the plant.

The new plant is located on West Alexander Avenue adjacent to the Georgia and Florida Railroad. The tract of land contains sufficient acreage to provide ample space for parking and future expansion. The buildings will contain approximately 138,000 square feet of floor space.

Southeastern Loom and Machine Works manufactures looms, loom parts, card and drawing coilers, spinning frame pulley spindle drives, centrifugal and gear size pumps, hydraulic presses, electro magnetic loom drives with electronic control, special machinery for the textile and paper industries.

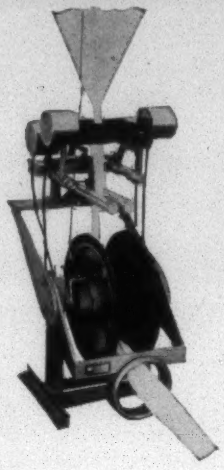
The company acts as sales agents for leading manufacturers of roving cans, loom bolts and nuts, leather, picker sticks, lays and hand rails, electric motors and switches, S & C hooks, springs, screws, bearings, oilite bushings, electrodes, lug straps and steel in all shapes and sizes.

James Hunter Machine Co. Buys W. D. Dodenhoff Co.

The W. D. Dodenhoff Co. of Greenville, S. C., has been sold to the James Hunter Machine Co. of North Adams, Mass. Established in 1937, Dodenhoff manufactures cotton and synthetic opening, blending and feeding equipment, a complete line of weaving supplies and accessories, and is agent for several nationally-known lines. According to terms of the sale, the firm will continue its operation as a wholly-owned subsidiary of James Hunter Machine Co. Officers will be James H. Hunter, president; William F. Leineweber Jr., vice-president and general manager; and Richard A. Hunter, secretary and treasurer. Prior to the sale Mr. Leineweber was president of Dodenhoff and Mrs. W. D. Dodenhoff was chairman of the board and treasurer. The founder of the firm, W. D. Dodenhoff, died in July 1953.

Bluestein Takes Over Hermas Machine Co.

Paul H. Bluestein & Co., 608 Terrace Plaza Bldg., Cincinnati, Ohio, has taken over the management of the Hermas Machine Co., Hawthorne, N. J., manufacturer of textile machinery and chemical mixing equipment. Paul H. Bluestein has become president, succeeding George P. Mason. R. R. Simpson remains as general sales manager and Max Kindler continues as director of engineering and general production manager.



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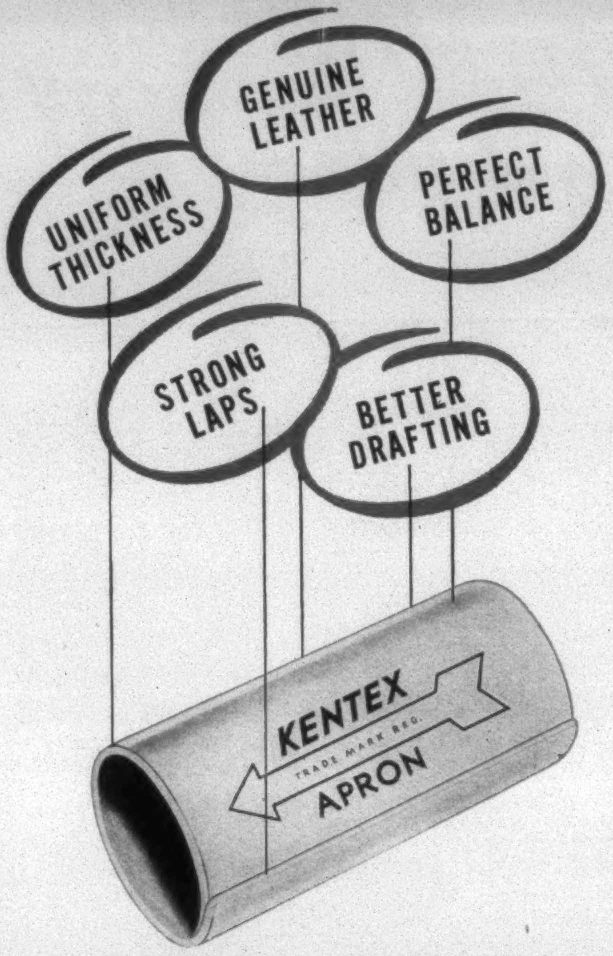

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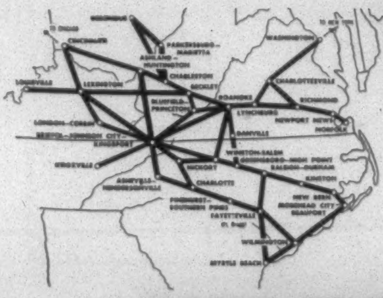

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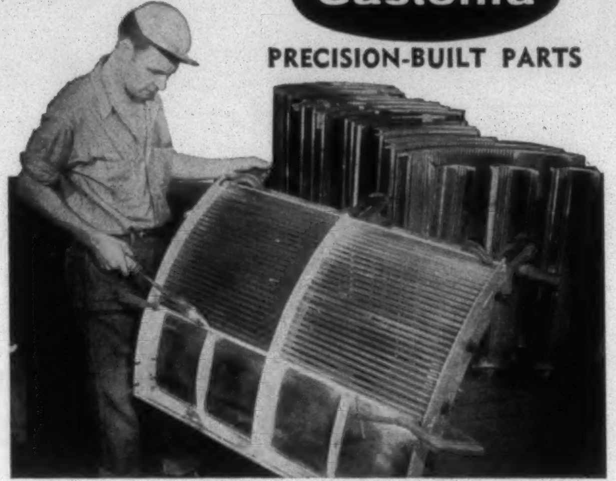

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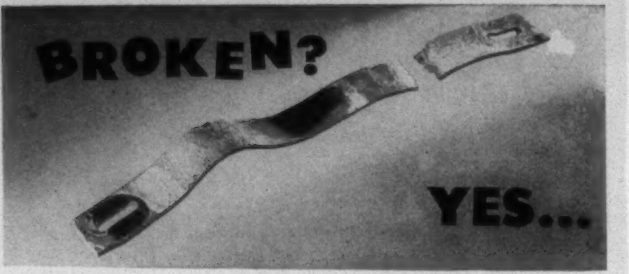

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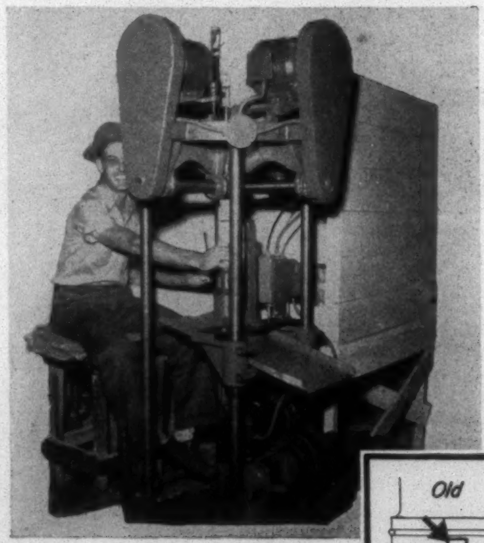
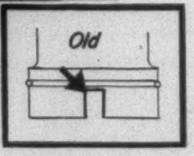
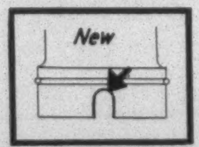




Newly designed Milling Machine cuts rounded top Dog Slots which have replaced all sawed Dog Slots on Monticello Card Room Bobbins. This milling cut results in a stronger Bobbin where most splits begin.



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TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving phases of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors and publishers. ¶ Circulation rates are: one year payable in advance, $1.50; three years payable in advance, $3.00; one year, Canada, $3.00; one year, other countries in Postal Union, $5.00; single copies, 25 cents. ¶ A companion monthly journal, THE KNITTER, is published by Clark Publishing Co. and devoted to the interests of the knitgoods manufacturing industry.

MEMBER: Audit Bureau of Circulations and National Business Publications Inc.

A Somewhat Dusty Answer To The Problem Of Imports

It is of reassurance to the textile industry in the United States that at long last Washington has recognized the precarious situation which the rising imports of cheap-labor Japanese cotton goods has posed for the domestic industry. And Washington's recognition of the grave problem contains the promise that import ceilings should and will be established for cotton goods, over-all and by categories, although these limits are to be fixed by voluntary and unilateral action of Japan.

Expressions of gratification have come from leaders in the industry following the disclosure of the framework of the arrangement of Sherman Adams, aide to President Eisenhower, at the recent meeting of the Northern Textile Association in Portsmouth, N. H. While the long fight of the industry, since the rapid spiral of Jap imports, has been for import quotas established on a bilateral and definitely binding basis, it has been apparent for some time now that odds for obtaining a system of quotas on that basis seemed insuperable, either through administrative or Congressional action, at least for the immediate future.

Consequently the new turn of events is welcomed by the industry but the expressions by mill men familiar with the situation are still in the nature of what might best be called "guarded optimism." What Mr. Adams announced at Portsmouth was the general provisions of an arrangement with the Japanese government whereby imports of cotton textiles, garments and other cotton products would be limited to the level of trade during 1955. The details of this program are yet to be completed, though Mr. Adams gave the assurance that definite limitations would be established for certain categories so as to prevent undue hardship to certain segments of the U. S. industry.

Thus there has appeared to be an inclination to withhold absolute judgment or evaluation of the government's program until it is finalized. As explained by Mr. Adams, efforts will be made to distribute imports equally by quarters. The arrangement is to commence on Jan. 1, 1957 and is intended to be effective for an indefinite number of years, although subject to annual review. The announcement of some kind of favorable action by the government on the import situation had been expected for a week or so before the Adams announcement as a consequence of comment made by Rep. Charles R. Jonas (R.-N. C.) after a visit to the White House.

While industry leaders, beyond stating that the "relief program" is an important step that restores to the industry a measure of confidence, have tended to be guarded and cautious in their comment until the whole plan is finalized and studied more fully, some political leaders in states where the textile industry is most heavily concentrated have tended understandably to view the entire matter as political expediency on the part of the Washington administration.

Gov. Luther Hodges of North Carolina, himself a former textile executive, viewed it as "sheer politics" and asserted the administration would never have done anything about Japanese imports except for the fact that an election is coming up. And Gov. George Bell Timmerman of South Carolina wryly commented: "Since the government in Washington has refused to act to protect the welfare of our people, it is gratifying to learn that the government of Japan is not equally indifferent."

South Carolina's Senator Olin D. Johnston went so far as to comment that the program "is designed to lull us to sleep and is not worth the paper it's written on," adding that "it contains no teeth and can be revoked tomorrow or after the election." Some newspapers, too, questioned the effectiveness or permanancy of any voluntary, unilateral program. The Atlanta *Journal-Constitution* observed that "something better than this Japanese gimmick must be provided."

There is undoubtedly some validity to the claim, which has been pointed up from time to time, that the Japanese have found it so easy to sell large quantities of textiles in the U. S. market that they have not worked to develop markets in other areas. In this respect, some figures on Japanese industry activity for the period of August through May, 1955-56, made public by the U. S. Department of Agriculture, are rather interesting.

In this period Japan imported 1,927,000 bales of raw cotton, an 11 per cent increase over the corresponding period of a year earlier. These imports included sharp increases from India and Pakistan and a sizeable drop in takings from the United States. Mill consumption in Japan during the same period amounted to 1,866,000 bales, a five per cent increase. Production boosts of about ten per cent took place in the manufacture of yarns and cloth.

Japanese exports of cotton fabrics for the first six months of 1956 totaled 662.6 million square yards, a 25 per cent jump over the corresponding 1955 period. Quite significantly, Hong Kong leads the list of principal destinations of Japan's exports during the first half of 1956, with the United States second. Last year the United States ranked as the leading export destination, and Hong Kong did not even appear on the list as a major market.

Quite obviously, under the program announced by Sherman Adams, the textile industry is getting somewhat less than it has been so urgently asking for, and getting it in a somewhat different manner than it had originally hoped. The fact is the government finally evolved a method and manner of dealing with the import crisis respecting cotton goods in a way that would not fundamentally alter the U. S. foreign trade policy. And it is quite heartening and significant also that arrangements have already been made for the U. S. industry's co-operation and consultation with the government in the whole plan to be ultimately evolved.

Preparatory to announcement of the voluntary plan of Japan to limit cotton goods exports to the United States, it is revealed, the Washington administration undertook a series of constructive discussions with representatives of the Japanese government several months ago. The present plan of Japan's is a much more comprehensive one than the voluntary limitations Japan placed on certain cotton goods to the United States early in the current year.

'Operation Dixie' Floundering, But Not The Union Shop Issue

Frequently now the A.F.L.-C.I.O. leaders, finding themselves in a stew of their own brewing, bewail and bemoan the fact that a number of Southern workers are seceding from the international unions. They go so far as to concede that the movement, unless it can be checked, ultimately is one of destruction.

As a matter of fact, labor's high command well knew and recognized that when it declared war, so to speak, on the generations-old Southern way of life and all that it represents, it was taking a not-very-calculated risk of scattering the seed for the destruction of unionism in the South, and at a time when the union structure is already rather shaky. Now it recognizes that there can be no recruiting of a substantial number of Dixie workers until "the South's whole way of thinking" is changed, to use A.F.L.-C.I.O. President George Meany's exact words.

It would begin to seem that the combined A.F.L.-C.I.O. is beginning to have as many problems as the old lady of nursery rhyme who lived in a shoe. In view of the fact that the South has always been a most frustrating region to the labor high command, it will be interesting indeed to observe the shape and course of the mammoth newspaper-radio-TV campaign that the A.F.L.-C.I.O. executive council has hatched to change the South's "whole mental attitude" on labor unions and segregation.

The big Southern "educational" drive was announced to the press at Miami by Mr. Meany. The A.F.L.-C.I.O. leadership began its unrestrained assault on the South's customs and pattern of co-existence despite confidential warnings from Southern agents in the field that a major revolt was brewing among Southern unionists.

Meanwhile, however, recent events have tended to bear out a well-founded suspicion that the A.F.L.-C.I.O. drive to organize the Southern textile workers, the vast majority of whom are unorganized, is a most difficult if not insuperable task or objective.

The collapse of the 15-week strike at the Rock Hill Printing and Finishing Co., for one thing, was a bitter blow to the combined A.F.L.-C.I.O. efforts to pump blood into the anemic textile unions. Inevitably it will have wide repercussions, beyond any issues involved in the strike itself.

The union leaders who brought about the Rock Hill strike considered it to be a sort of test—a test, so to speak, which coincided with the merged unions' long-heralded drive to organize the South's largest industry. The fact that the "test" on a battleground of the union's own choosing turned out to be a complete fiasco naturally raises many questions that textile workers cannot but ponder in respect to what the merged A.F.L.-C.I.O. has to offer them.

The Rock Hill strike was never fully effective. Many workers stayed on the job and some strikers returned at intervals. The Rock Hill plant, which normally employs about 4,000 persons, was able to farm out orders to other finishing plants. An attempt by labor to agitate a boycott of Lowenstein textile products at big department stores in the Eastern centers of population failed to attain any result or objective that union leaders might have fondly visualized.

And finally, after losing 15 weeks of wages, a majority of the union members voted to accept a company proposal for a non-strike agreement in a one-year extension of the present contract to April 15, 1958, with no change in the wage pattern. Thus the strikers returned to work on a seniority basis, without any part of the 25-cents-an-hour wage hike for which they struck, and which they subsequently lowered to 15 cents.

The company, of course, indicated it would go along with any general wage increase in the industry whenever such an increase came. The workers, of course, would get that anyway. Except for sporadic outbreaks of violence, and the loss of 15 weeks' pay, the strike accomplished nothing for those who joined it. It should, of course, have been obvious to labor leaders that the wage increase they demanded was one which the industry could never consider at that time.

Granted, in all fairness, that hindsight is usually better than foresight, it must nevertheless be ironic to the instigators of the Rock Hill grandstand play or extravaganza, or

TEXTILE INDUSTRY SCHEDULE

— 1956 —

Oct. 22-26 (M-F)—**NATIONAL SAFETY CONGRESS AND EXPOSITION** (sponsored by National Safety Council), Chicago, Ill.

Oct. 25-26 (Th-F)—Annual meeting, **CARDED YARN ASSN.**, Hotel Fort Sumter, Charleston, S. C.

Oct. 27 (Sa)—**PIEDMONT DIV., S.T.A.**, North Carolina Vocational Textile School, Belmont.

Oct. 27 (Sa)—**ALABAMA TEXTILE OPERATING EXECUTIVES**, Thach Auditorium, Alabama Polytechnic Institute, Auburn.

Nov. 1-2 (Th-F)—**PERSONNEL DIV., S. C. TEXTILE MFRS. ASSN.**, Ocean Forest Hotel, Myrtle Beach, S. C.

Nov. 1-2 (Th-F)—Textile conference, **AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS**, North Carolina State College, Raleigh.

Nov. 3 (Sa)—**SOUTH CAROLINA DIV., S.T.A.**, Clemson House, Clemson, S. C.

*Nov. 3 (Sa, 7 p. m.)— **SOUTHERN TEXTILE OVERSEERS ASSN.** (woolen and worsted), Poinsett Hotel, Greenville, S. C.

†Nov. 10 (Sa)—**NORTHERN NORTH CAROLINA-VIRGINIA DIV., S.T.A.**, Cooleemee (N. C.) High School.

Nov. 26-30 (M-F)—**NATIONAL EXPOSITION OF POWER AND MECHANICAL ENGINEERING** (sponsored by American Society of Mechanical Engineers), New York Coliseum, New York City.

Nov. 27-30 (Tu-F)—**NATIONAL CHEMICAL EXPOSITION** (under auspices of American Chemical Society), Cleveland (Ohio) Public Auditorium.

Dec. 1 (Sa)—**SOUTH CENTRAL SEC., A.A.T.C.C.**, Hotel Patten, Chattanooga, Tenn.

Dec. 4-5 (Tu-W)—Conference, **COATED FABRICS DIV., SOCIETY OF THE PLASTICS INDUSTRY**, Hotel Commodore, New York City.

Dec. 8 (Sa)—**SOUTHEASTERN SEC., A.A.T.C.C.**, Atlanta, Ga.

— 1957 —

Jan. 28-29 (M-Tu)—Annual meeting, **NATIONAL COTTON COUNCIL OF AMERICA**, St. Louis, Mo.

Jan. 28-31 (M-Th)—**PLANT MAINTENANCE & ENGINEERING SHOW**, Cleveland (Ohio) Public Auditorium.

Feb. 25-27 (M-W)—**GEORGIA SEC., AMERICAN SOCIETY FOR QUALITY CONTROL**, Georgia Institute of Technology, Atlanta, Ga.

Feb. 25-Mar. 1 (M-F)—**INTERNATIONAL HEATING & AIR CONDITIONING EXPOSITION** (sponsored by American Society of Heating and Air Conditioning Engineers), International Amphitheatre, Chicago, Ill.

Feb. 27-Mar. 1 (W-F)—**COTTON RESEARCH CLINIC** (sponsored by National Cotton Council), General Oglethorpe Hotel, Savannah, Ga.

*Mar. 28-29 (Th-F)—**TEXTILE QUALITY CONTROL ASSN.**, Clemson House, Clemson, S. C.

Apr. 4-6 (Th-Sa)—Annual convention, **AMERICAN COTTON MFRS. INSTITUTE**, Palm Beach Biltmore Hotel, Palm Beach, Fla.

Apr. 9-11 (Tu-Th)—**NATIONAL PACKAGING CONFERENCE AND EXPOSITION** (sponsored by American Management Assn.), International Amphitheatre, Chicago, Ill.

Apr. 10-12 (Th-Sa)—Annual meeting, **ALABAMA COTTON MFRS. ASSN.**, Buena Vista Hotel, Biloxi, Miss.

May 1-2 (W-Th)—Spring meeting, **THE FIBER SOCIETY**, Clemson House, Clemson, S. C.

May 1-4 (W-Sa)—Annual convention, **COTTON MFRS. ASSN. OF GEORGIA**, Emerald Beach Hotel, Nassau, Bahamas.

May 20-25 (M-Sa)—**NATIONAL COTTON WEEK** (sponsored by National Cotton Council of America).

June 20-22 (Th-Sa)—Annual convention, **SOUTHERN TEXTILE ASSN.**, Ocean Forest Hotel, Myrtle Beach, S. C.

*Sept. 27-28 (F-Sa)—**COMBED YARN SPINNERS ASSN.**, The Cloister, Sea Island, Ga.

Nov. 14-16 (Th-Sa)—National convention, **AMERICAN ASSN. OF TEXTILE CHEMISTS & COLORISTS**, Hotel Statler, Boston, Mass.

— 1958 —

Jan. 27-28 (M-Tu)—Annual meeting, **NATIONAL COTTON COUNCIL OF AMERICA**, Phoenix, Ariz.

Apr. 10-12 (Th-Sa)—Annual convention, **AMERICAN COTTON MFRS. INSTITUTE**, Hollywood Beach Hotel, Hollywood, Fla.

May 26-29 (M-Th)—**NATIONAL PACKAGING CONFERENCE AND EXPOSITION** (sponsored by American Management Assn.), New York Coliseum, New York City.

June 19-21 (Th-Sa)—Annual convention, **SOUTHERN TEXTILE ASSN.**, The Grove Park, Asheville, N. C.

‡Fall—National convention, **AMERICAN ASSN. OF TEXTILE CHEMISTS & COLORISTS**, Conrad Hilton Hotel, Chicago, Ill.

(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday; (Su) Sunday

****Listed for the first time this month.*** ***‡Tentative listing.*** ***†Changed or corrected from previous issue.***

whatever it was, that within a matter of a few weeks after the strike ended so disastrously for the unions, a pattern of general wage increases began to develop throughout the industry, touched off by initial announcements by two of the textile giants, J. P. Stevens & Co. and Burlington Industries, which are prime union targets since the union announced months ago that the big companies or chains were what they intended to concentrate on the most.

What the union leadership did not foresee, of course, was that just a few days before the pattern of general wage increases began to develop in the industry, the government was to announce a voluntary but definite agreement on the part of Japan, which places a ceiling on the flood of low-cost cotton goods imports that have been reaching the U. S. market and which for better than two years have had a very unfavorable impact on the confidence of the industry as a whole, particularly as it looked ahead to the future.

Actually, the concentration of Japanese exports to this country in certain categories caused the liquidation of at least one mill, probably was a factor in other liquidations, caused serious production cut-backs and the cancellation or postponement of several expansion projects, running into millions of dollars, which had been announced before the effect from the spiraling imports became so acute. Southern workers have demonstrated time and time again that they are not gullible when it comes to grandiose union promises, but whosever judgment it was in the calling of the Rock Hill strike was particularly ill-advised in view of the precarious situation in which the textile industry, not saddled with merely one post-war problem, but all of them, has found itself for the last several years.

The developments of recent weeks which have just been recounted have not, however, been the only frustrations for the blue-printers of the widely heralded mammoth organizational drive upon the Southern textile industry, where union membership has gone down to its skimpiest and where the conditions of the textile workers are better than they are in any other section of the country. So far as the C.I.O. and A.F.L. textile unions go, the A.F.L.-C.I.O. merger is still somewhat in the nebulous realm of theory, for their own internecine warfare and self-interests have precluded anything that seems to give promise of an integrated, single textile union in any sense of the word.

Last, but by no means the least, of the union's troubles and frustrations is the affair at Darlington, S. C. At Darlington, on Sept. 6, the employees of the Darlington Mfg. Co. voted, 256 to 248, in a National Labor Relations Board election, to have the Textile Workers Union of America represent them. Dissatisfaction with the election caused management of the company to call a meeting of stockholders for Oct. 17 to consider liquidation of the cotton mill, which is a part of the Deering-Milliken group.

Meantime Deering-Milliken lawyers filed a protest against the election and until the N.L.R.B. acts upon this protest the board cannot certify the Darlington election. In the interim there has developed the rather unusual situation of employees—purportedly over 400—signing a petition calling for reconsideration of the Sept. 6 vote. The petition

New Bahnson Collecto-Vac increases production efficiency at Aleo Manufacturing Company

Bahnson Collecto-Vac installed on frames in Spinning Room at Aleo Manufacturing Co., Rockingham, N.C.

New automatic broken-end collection unit

- helps increase spinner efficiency
- improves product quality
- simplifies plant maintenance

Here are important features of the Bahnson Collecto-Vac which make it outstanding for economy and dependable performance:

ANODIZED ALUMINUM FLUTES eliminate flute warpage and minimize static build-up.

HIGH SUCTION EFFICIENCY—Specially engineered main duct distributes maximum pressure throughout system utilizing Bahnson-designed fan for high air handling effectiveness.

ECONOMICAL OPERATING COST—Bahnson designed fan requires less power to maintain even vacuum pressure, and the special construction of the airtight duct and flute connecting tubes makes for more efficient performance.

Left:
Double Collecto-Vac collection box serving two frames.

Bahnson
COMPANY
WINSTON-SALEM, N. C.

WRITE US TODAY
for detailed information on the new Bahnson Collecto-Vac

AIR CONDITIONING • CLEANING • VACUUM COLLECTION

was circulated by a mill employee and several other workers who helped him.

The petition asks management to request another election or if that is impossible to inform the petitioners how they might obtain another election or the cancellation of the one held early in September. The petition also expresses the belief that a majority of the workers who voted for the union did so under a misapprehension and were misled and misinformed.

According to those in close touch with the legal aspects of the unusual situation at Darlington, there are two ways in which the particular election could be negated. One would lie in the N.L.R.B. acting in favor of the mill in the matter of the challenge of five ballots and four void ballots cast in the original election. Since the union won by a margin of eight votes, it would be necessary for the N.L.R.B. to rule in favor of the mill on all the challenged and voided ballots.

And of course it is possible for the employees to petition the N.L.R.B. to decertify the election if they can prove fraud or misrepresentation. However, it is entirely up to the board, of course, to decide if the grounds or case presented to support a charge of fraud or misrepresentation are sufficient to warrant decertification. On the other hand, grave doubt has been expressed both by legal and labor authorities that the N.L.R.B. can in any way intervene to thwart management's intention to liquidate the mill.

The Darlington plant employs around 500 workers and operates nearly 900 high-speed looms producing over 600,000 yards of oxford, broadcloth, poplin and print cloth weekly. The mill, organized in 1883, is one of the two largest industrial operations in Darlington and is the city's second largest taxpayer.

The threatened or impending closing of the mill naturally has caused the gravest concern among city and county officials and the commercial life of Darlington. Darlington merchants say they anticipate a cutback of at least one-third of their employees if the mill is liquidated. County officials say it will be necessary to levy an additional county-wide tax to replace the lost revenue if the mill is permanently shut down.

The outcome of the Darlington dilemma and the Darlington Mfg. Co.'s dilemma will be watched throughout the nation, for the case is indeed a significant one, not only for the textile industry in the South but for other industries in the South and nation. All of the Milliken group of mills are now situated in South Carolina, North Carolina and Georgia. More than half of them, or about a dozen, are in the State of South Carolina, producing cottons, synthetics and woolens.

Once the Milliken operations were confined altogether to New England. But the Millikens found out long ago in New England just what the entrance of the unions into the textile industry means. It is, of course, a matter of history that they closed down their Madison Woolen Mills when they found they couldn't operate it efficiently under unrealistic demands of the unions in New England.

The affair at Darlington, patently, has implications which make it more than a crisis for the city of Darlington.

Meanwhile it is quite true that one difficulty after another besets the grandiose campaign of the textile unions which so far has not been entirely without some aspects of a salvage operation. Yet, however all this may be, management cannot afford in the least to ignore the unions' greatly stepped-up attack on the state right-to-work laws and the Taft-Hartley Act. This "political education" campaign of the A.F.L.-C.I.O. is something concrete.

They don't, naturally, ballyhoo the matter, but the labor unions are geared for an all-out and well-heeled battle to repeal the right-to-work laws in the 17 states, largely in the South, which have enacted them. Likewise, they are willing to spend large sums to prevent the adoption of such laws in other states. The repeal of the right-to-work law in Louisiana this past Spring should serve as an adequate warning to management. The Louisiana battle was simply lost in the legislative elections and in the gubernatorial race. It was essentially a matter of business and industrial interests having permitted candidates opposed to right-to-work legislation to gain a majority at the state capitol.

What happened in Louisiana can happen in other Southern states.

The A.F.L.-C.I.O. attack is two-pronged. First, they would seek repeal in Congress of the provision of the Taft-Hartley Act which let the states enact right-to-work laws. By a single stroke the state laws thus could be wiped off the books. The prospects of getting such a repeal on Capitol Hill are none too sanguine, however. So the unions are concentrating particularly on electing men to the state legislatures who will oppose right-to-work laws. It is in the individual states where the real fights can be expected to evolve.

The Tombstone Read 'Too Late'

Some months back we had an opportunity to observe the chronic illness and final days of a once-proud and successful textile manufacturing concern. For the purpose of this writing it is best left unidentified.

The story is all the more grievous because during the many years of this firm's existence it had become one of the leaders in its line. Prosperity had continued over a long period.

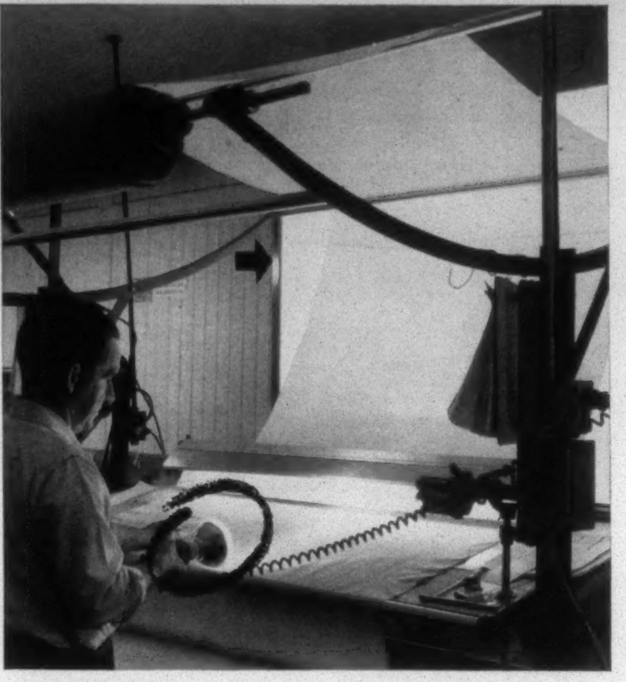
For certain reasons which came to bear a number of years ago, the demand for this firm's particular production began to dwindle. Not only did this particular firm suffer, but hardship was felt by its competitors as well. The public appetite was sated, and the market all but disappeared.

Some of this company's competitors took a look at the situation and reacted forcibly. They realigned their processing to make something different, and opened up new markets with new styles. Some even continued to produce the same basic item as before, but they modernized their plants with improvements in manufacturing methods.

But, in the case of this one firm with its prosperous past and respectable reputation, it appeared that management was the victim of its own success. Self-satisfaction and complacency were the real villains, personified in management. When the market first began to drop off no one was ready to meet the challenge. Nothing was done until things had gone from worse to impossible, but at that point even the good intentions came too late.

In this day and age, complacency is a habit that you cannot afford. In your plant are there opportunities where you can take action to add efficiency, reduce costs, improve quality—improve any aspect of operations?

They proved it in Klopman Mills, Inc.—Asheboro, N. C.



FINAL INSPECTION—Portable directional General Electric PAR lamp insures detection of imperfections in finished cloth. A luminous panel in back of the fabric, lighted by nine G-E 40-watt fluorescents, bares even the smallest flaw.

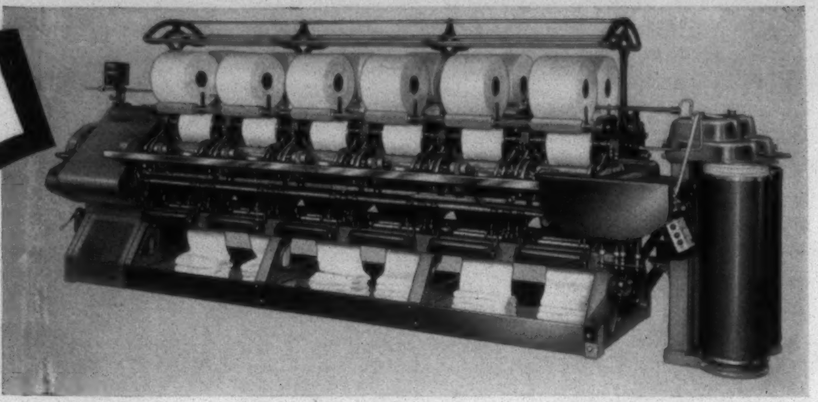
HOW GENERAL ELECTRIC LAMPS HELP DETECT TROUBLES BEFORE THEY GET COSTLY!

AT KLOPMAN MILLS, INC. Asheboro, N. C., where delicate fabrics are created for women's and children's wearing apparel, a vital step in production is catching defects before they get costly. To help improve their inspection techniques, Klopman Mills took a close look at the lighting throughout the plant. Today, by the time fabrics reach the luminous panels of final inspection, shown above, they've spent much of their life under the revealing glow of specially selected lamps.

GENERAL ELECTRIC four-foot fluorescent lamps provide general inspection lighting—and G-E PAR-38 lamps provide grazing light so inspectors can quickly detect broken fibers. The PAR-38's are also used in sizing, grading and final inspection. These are critical seeing jobs where small variations in thickness or twist of yarn, or a broken thread, can ruin an entire run of fabric. The lighting techniques used at Klopman Mills, Inc. assure their customers that quality control is the best guarantee of a quality fabric. It may pay you to take a closer look at your lighting, too. Call your local General Electric distributor for the right answers to your lighting questions. General Electric Large Lamp Dept., Nela Park, Cleveland 12, Ohio.

Progress Is Our Most Important Product

GENERAL ELECTRIC



6 REASONS WHY

THE AMERICAN THREAD COMPANY

ONE OF THE FOREMOST PRODUCERS
OF QUALITY SEWING THREADS,

HAVE PURCHASED

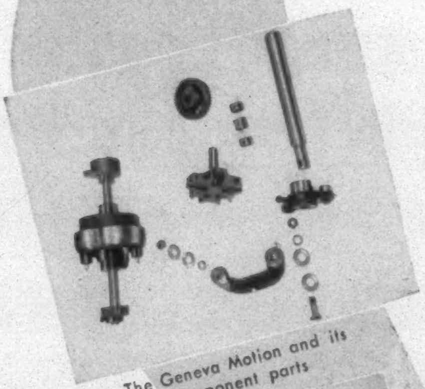
SACO-LOWELL
MODEL 56 COMBERS

After exhaustive tests by the Research and Operating Departments of American Thread, the following facts were conclusively proven about Saco-Lowell's Model 56 Comber:

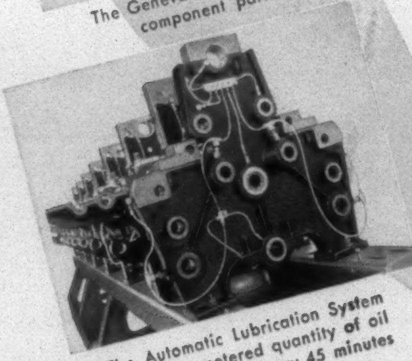
1. Higher production per man-hour was obtained in combing both American and Egyptian cotton.
2. A definite increase in recovery of spinnable fibre, showing a high degree of detaching efficiency.
3. Low variation in sliver weight.
4. Accurate control of noil from comber to comber and head to head.
5. Increased production per square foot of floor space.
6. Fully automatic lubrication assured reduction in maintenance costs.

We are extremely proud that this fine, quality-conscious company has selected the Model 56 Comber for their Clover Plant. They join a distinguished group of mills who have already improved their combing operations by Saco-Lowellizing.

Saco-Lowell Model 56 Combers are producing as much as 55 lbs. per hour with 1³⁄₁₆″ American cotton. In addition, test after test has shown a detaching efficiency that is 2% better than any other comber. Your mill can enjoy this performance and corresponding increase in profit.



The Geneva Motion and its component parts



The Automatic Lubrication System delivers a metered quantity of oil to every bearing every 45 minutes

SACO-LOWELL
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Shops at BIDDEFORD and SACO, MAINE; and SANFORD, N. C.
SALES OFFICES: CHARLOTTE • GREENSBORO • GREENVILLE • ATLANTA

Your nearest Saco-Lowell Sales Office will be glad to send an engineer to discuss your combing operations.

textile bulletin

VOL. 82 OCTOBER 1956 NO. 10

S. T. A. Members Discuss

New Developments Seen At The Greenville Show

The Eastern Carolina Division of the Southern Textile Association held its annual Fall meeting Saturday morning, Oct. 13, at the School of Textiles, North Carolina State College, Raleigh. Topic for the meeting was "New Developments in Textile Equipment on Display at the 19th Southern Textile Exposition." Presenting first-hand reports on what they saw at the Greenville show were Worth Kirkman, Pilot Mills Co., Raleigh, "Picking and Carding Equipment"; W. A. Rhinehardt, Golden Belt Mfg. Co., Durham, N. C., chairman of the S.T.A. Eastern Carolina Division, "Spinning Equipment"; Olen F. Marks, head of the department of warp preparation and weaving, N. C. State College, "Warp Preparation and Weaving Equipment"; and W. A. Thomason Jr., president, Thomason Textile Service Inc., Charlotte, N. C., "New Testing Equipment." Elliott Grover, head of the department of fiber and yarn technology, School of Textiles, N. C. State College, acted as moderator. (The accompanying pictures of capital equipment seen in operation at the Greenville show were taken by the TEXTILE BULLETIN staff.)

Picking And Carding Equipment

By Worth Kirkman

The Cen-Tennial Cotton Gin Co. had in operation its fiber-opener. This machine is based on the S.R.R.L. principle of opening without the licker-in type spiraling effect. They claim that it will open cotton at about 1,500 pounds per hour, eliminate heavy trash and not break the leaf, without machining and beating. It is recommended for use between the Cen-Tennial Aerator and Cen-Tennial separator.

Kirkman & Dixon Machinery Co. had its lint cotton opener on display. This is the patented S.R.R.L. cleaner which has been discussed at previous S.T.A. meetings. They also had a single-cylinder waste machine, which is not new, on display.

W. D. Dodenhoff Co. displayed its fiber meter attached to a feeder hopper. The fiber meter blends automatically on a weight basis. These hoppers are so synchronized by a control panel that no mechanical resetting is necessary when changing blends. They also displayed the Temco cleaner. It is built on the principle of the Centrif-Air machine except on a 60° angle instead of a 45° angle for better cleaning. In the display was the Unitint. This is a hopper feeder with three stacked aprons following the tinting chamber. Infra-red drying lamps are optional.

Aldrich Machine Works displayed its Lummus Pepper Shaker, which is copied from the Superior cleaner except that they claim two to three times more cleaning with the Pepper Shaker. It has a series of beaters that are made up of small round pegs, and each beater strips the previous beater. It has round grid bars. Aldrich also displayed its picker with several new attachments. One attachment holds the shipper rack on the side evener in place when the picker stops. Also an improvement has been made in the friction let-off giving a heavier lap.

Saco-Lowell Shops showed its steel compression rolls for the calender head. This head included anti-friction bearings and hardened steel gears. A new leverage system enables them to put a pressure of $2\frac{1}{2}$ to $3\frac{1}{2}$ tons on the rolls. It produces an 85-pound lap.

To digress briefly, what comes to my mind when you get a lap of that size is, what is the poor old card tender going to do? Of course, you have all the machinery for moving laps; but, as was remarked by one of the manufacturers who does not use automatic equipment, these have not reached perfection either.

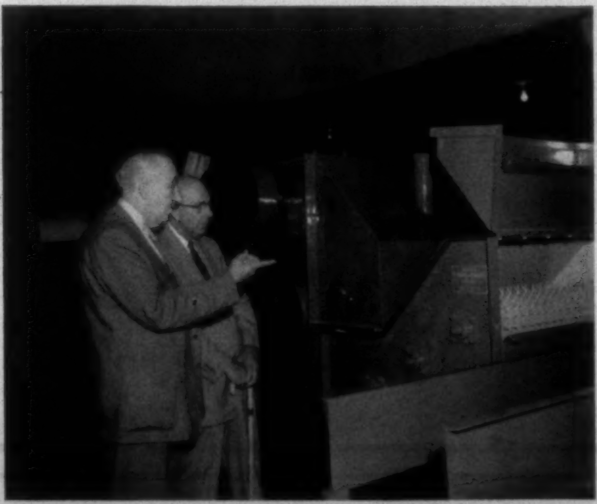
The Strandberg Moisture Monitor, which was displayed by Strandberg Engineering Laboratories, is a device for controlling the weight of the lap according to the moisture in the cotton.

Carding

All manufacturers of card clothing seemed to be present at the show, but the only relatively new thing that I observed was the clothing distributed by Oliver Landis and manufactured by A. B. Kardbeslag Co. They have a clothing at a competitive price that they claim needs grinding only every eight to 11 months. You grind with No. 40 grit fillet, and they say that it is possible to sharpen it. My question was, if it takes so long for it to get dull, how long will it take to sharpen it? They don't actually know, but feel that it will sharpen easily.

Kirkman & Dixon Machinery Co.—Draft roller cleaner.

W. D. Dodenhoff Co.—Inclined conveyor opener and automatic revolving drum blending chamber.


Aldrich Machine Works—The Lummus Pepper Shaker opener.

Abington Textile Machinery Works had an old model Whitin card equipped with Rolaslivup. The card blade is replaced with a roller, and the card is equipped with Abington vacuum stripping. The operator opens the valve and moves the nozzle to starting position and cuts out the feed. The mechanism automatically strips, closes the valve, throws in the feed, and pieces the end after 5½ turns of the doffer.

All of you know that there are a multitude of coiler conversions on the market. There seems to be no limit to the size of the cans. When the can gets too heavy for the operator, the cans are equipped with dollies. Almost any size coiler can be purchased up to 20″ by 42″. One manufacturer would not recommend a size. He said, "You decide and we will build it."

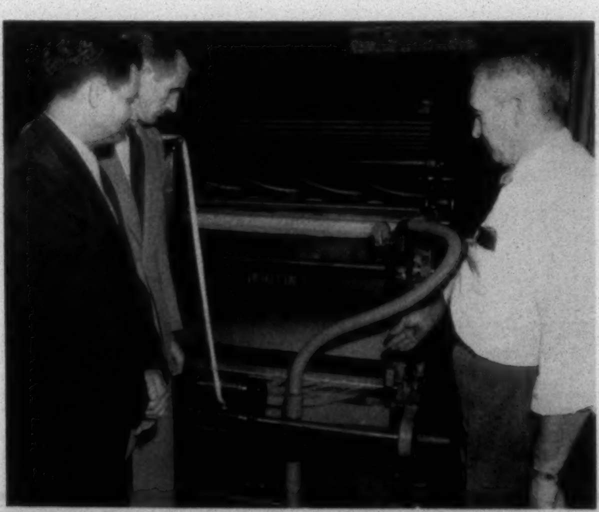
At all places possible the use of ball bearings and chain drives are recommended. Individual card drives are offered —gear or belt driven. Southern States Equipment Co. offers an individual drive with a clutch for roller stripping.

Combing

I saw only one comber at the show. If there were any others there, I missed them. Saco-Lowell had its Model 56 comber on display. A few of the production figures follow:

	SUPER QUALITY	GOOD QUALITY
Lap weight	720 gr./yd.	840 gr./yd.
Per cent noils	18	15½
Sliver weight	55 gr./yd.	60 gr./yd.
Lbs./comber/hr. (100%)	36.2	59
Efficiency	92-95%	92-95%
Combers/operator	6-8	6-8

It has 4 over 5 draw box, 12 heads per comber and uses 12″, 14″ or 15″ coilers. The Whitin Model J Comber was not displayed.


Abington Textile Machinery Works—The Rolaslivup method for taking fibers off the doffer by means of a pair of controlled rolls that completely replace the reciprocating comb.

Drawing

While not entirely new, one of the biggest improvements I think is in drawing. Many of you are familiar with the Whitin Even-Draft draw frame, which has a front roll speed of 250-300 feet per minute. This frame will handle stock from 7/8" to 3" long. It has over-arm weighting, anti-friction bearings, and a 4 over 5 drafting system. This frame will accommodate 14", 15" or 16" cans, either 36" or 42" high. It has Pneumafil clearer units and electric stop motions. At the show they were running 55 grain sliver at 300 feet per minute, putting 40 pounds in a can 16" x 42". It uses synthetic top rolls.

Saco-Lowell's draw frame, the Versa-Matic runs with front roll speeds of from 250 to 300 feet per minute. Roll weighting is from the top, and anti-friction bearings are used throughout the frame. It has an automatic, mechanical, self-cleaning clearer system with built-in static conductors and electric stop motions. Two drafting systems are available—3 over 4 and 4 over 5. The steel rolls are driven independently. At the show they were running 55 grain sliver at 314 feet per minute, putting 30 pounds in a 15" x 42" can. All top rolls are synthetic.

Ideal Machine Shops displayed its Feather-Touch draw frame. This frame has four rolls, all metallic, with spacing sections running on ball bearings. This frame has a new Bahnson clearer unit and all-electric stop motions. It runs at 400 feet per minute and is driven by a hydro-electric clutch mechanism. The creel is mechanically driven and the frame is equipped with 16" x 42" cans.

Gossett Machine Works displayed its five roll drawing equipped with synthetic top rolls and metallic rolls. I have no production figures on this frame.

O. M. Spinning Machine Mfg. Co. of Osaka, Japan, showed its conventional-type drafting system running at a speed of 125 feet per minute. This machine was making a package for the O-M spinning machine. The turntables on the draw frame can accommodate four cans for the spinning creel. These will vary in size, depending upon the gauge of the spinning frame (3" gauge takes a 5⅜" can). When one can is full, the table rotates 90° and a knife cuts the sliver and throws the tail to the outside. All of this is done without stopping.

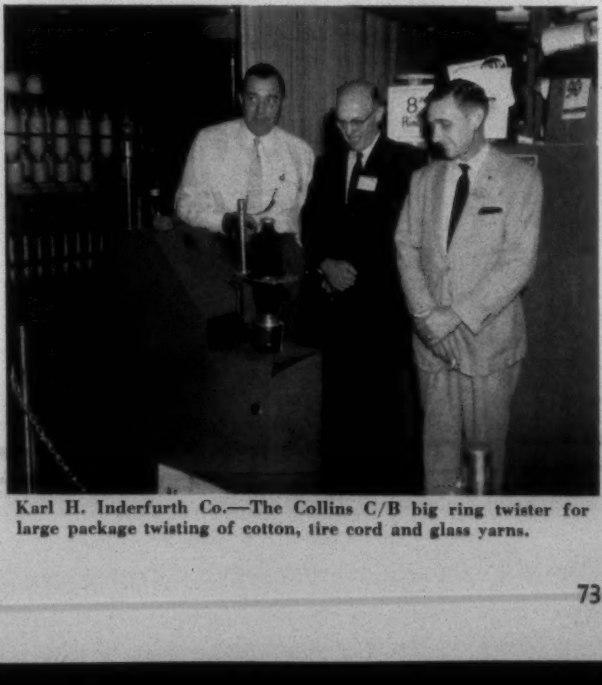
Ideal Industries Inc.—New 18-inch gauge drawing frame featuring electric knock-off, magnetic clutch, Bahnson vacuum cleaning system, signal lights, driven lift creel.

Roving Frames

There appeared to be nothing very new in roving frames. Adams Inc. had a frame equipped with the Adams stop motion and Pneumafil had its Pneumastop. There is an

Whitin Machine Works—Even-Draft drawing frame.

Saco-Lowell Shops—The new Versa-Matic high production drawing frame designed to operate at delivery speeds in the range of 300 feet per minute.

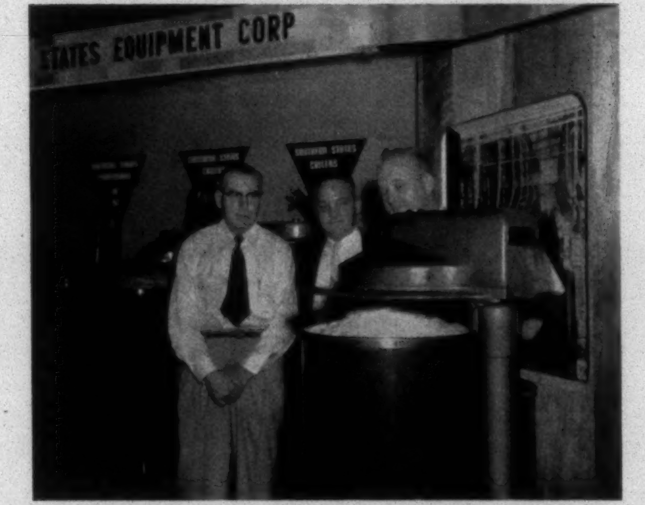


Karl H. Inderfurth Co.—The Collins C/B big ring twister for large package twisting of cotton, tire cord and glass yarns.

anti-friction bearing and a chain drive for almost anything. Thoma Co. has a unit for imparting false twist to roving between the top of the flyer and the front rolls. This was not in operation.

The Terrell Machine Co. had its Type M roving bobbin cleaner in operation. It cleans 60 bobbins per minute and blows out the inside of the bobbin.

T. B. Wood's Sons Co.—The new Wood's card drive.



Southern States Equipment Co.—Can dolly and drive.

Pneumafil Corp.—Vacuum cleaning systems.

Roller coverings are available in almost any type to meet your needs. The trend is toward making everything as nearly anti-static as possible. Tests are constantly being made to develop coverings that have fewer lap-ups and that also will be protected from ozone cracking and will withstand the terrific weight that is placed upon them by the new drafting systems.

Conveyors, cleaners, etc. are available to do any job necessary. Blowers may be purchased to do any job from cleaning ceilings to sweeping floors. I never thought that I would see air in use on a roving frame, but Parks-Cramer has it. It was a very good show. I just couldn't take it all in without staying for days.

Discussion

Mr. Grover: Thank you, Worth. I'd like to add to what you said about the Abington Rolaslivup. We have had that here for some time in the research department, which has been looking for machines to replace the doffer comb on the card. By using the Abington unit we have been able to get up to 100-pounds-per-hour production on the card. I do not say you can do that in the mill tomorrow, but we were getting pretty good work.

On the drawing frames, 41-inch cans make a pretty high drawing frame, which it is rather hard for the operator to work on. I guess we shall have to get some of these lanky, skinny guys to do the work.

Mr. A: Is there anything from the mechanical point of view that will determine the proper can to run?

Mr. Grover: The question is, in essence, how far can we go? I do not know that there is any easy answer. Obviously we are all faced with high labor costs, and we try to decrease the cost of handling. The 12-inch can has 12 or 15 pounds net weight in the can. As you increase in size a one-inch addition gives you a lot of extra capacity. So I presume it is going to come down to the question of handling. I presume there is no limit to the size of the can so far as handling is concerned.

Mr. B: Take the extreme that you mentioned, the diameter of 20 inches. Is it coiled all right in the can, so it can come out?

Mr. Grover: If it has a 20-inch diameter it seems to me that at least in one way the coils should be better than in the 12-inch can, because the angles are not as sharp. You have less curvature there, so you should have less distortion.

Mr. B: Does it pack down in the bottom of the can so it is difficult to get it out?

Mr. Grover: That is one of the questions that can be answered only when you have high production. We are hampered here at N. C. State because our production is small.

Mr. C: Wouldn't that difficulty be obviated by using spring-bottom cans?

Mr. Grover: Of course. And there were spring-bottom cans on

TRADITIONAL REINER MACHINES
A standard installation on a Bobbin Stripper

Robert Reiner Inc.—The new Reiner quill polisher designed to be fed directly from Terrell Model L or K stripping units.

display at Greenville. A few years ago some people came here to see if they could learn of any applications in the mills for feeding equipment—you know the sort of thing used in cafeterias and other places, where a pile of plates is pushed down into a holder which has a spring in it which feeds up one plate at a time. Those people asked if that sort of thing could be used in applications in the mill, and we suggested their use in cans and can trucks. I noticed at Greenville that one manufacturer had spring-bottom doffing trucks, and it makes sense.

Mr. D: Unless you have 8" gauge roving or creel, 15" is too big for any gauge on the roving frame. We have had trouble because of that.

Mr. Grover: Yes, that will cause trouble. A few years ago the School of Design here in the college designed a mill in which everything fed down by gravity from one machine to the other. The only trouble with that idea was that they did not allow for any ends breaking.

Mr. Rhinehardt will now take over. He is going to tell us about the new spinning equipment he saw at the Southern Textile Exposition.

Spinning Equipment

By W. A. Rhinehardt

Norlander-Young Machine Co. had on display and in operation a sample spinning frame with complete ball bearing installation for the top rolls and the bottom steel rolls. An installation of this type completely eliminates all oiling as far as the top rolls and bottom steel roller stands are concerned.

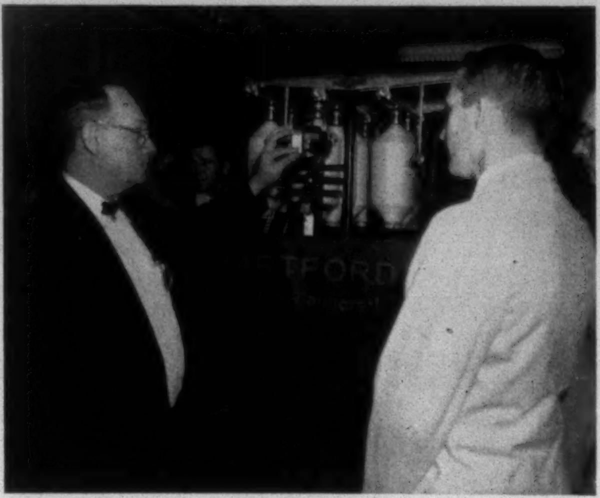
Another feature of this frame was that the roller stands are set at a 45° angle, which gives a straight line from the roving trumpet at the back of the rollers to the thread guide at the front. With this type of installation, Norlander-Young states that the twist is allowed to run up to the bite of the front top and bottom steel roller.

The top rolls are weighted with a swing saddle center suspension, which eliminates roller picking altogether. There is a dead weight of 30 pounds on the first and second top rolls. On the third top roll you have a weight of 20 pounds, which is applied by a spring.

Norlander-Young states that the sealed ball bearings that they use have been in operation for over three years and that they have had only eight ball bearings to replace.

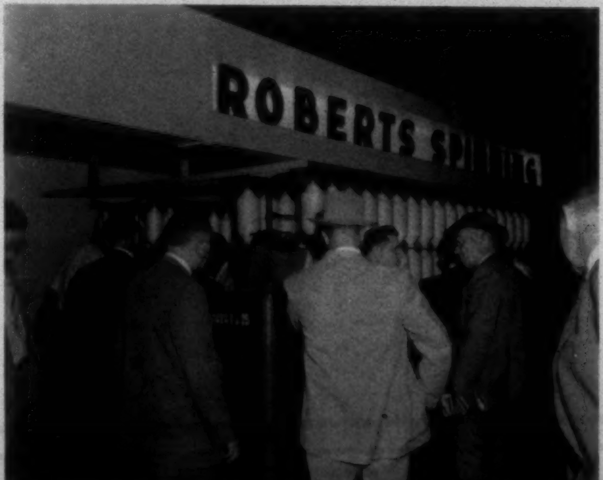
Whitin Machine Works has developed a center suspension for top rolls which they call Whitin Unitrol Center Suspension. Basically this is the same as that of most other companies who are making center suspensions for spinning top rolls, except in design. The weighting of the top rolls in this instance is by spring only. A total pressure of 60 pounds is distributed over the three lines; 30 pounds on the front line and 15 pounds on the middle and back lines. Any desired weighting can be obtained by using different springs. The front top roll has a rigid shaft mounting four high-precision anti-friction bearings, and the second and third rolls are of the non-lubricated type. Again we have a system of roll weighting where no oil is being used. The top rolls are pre-lubricated at assembly, and regreasing will not be required for a long period of time. When regreasing is required, this is accomplished with the use of a needle-type grease gun inserted through the end metal shields without disassembly. The Unitrol center suspension is held in place by a toggle arm that is hooked through its lower end to an eye in a rod securely bracketed to the roller beam.

One of the big advantages of this center suspension other than not having to be oiled is that, when it becomes neces-



Hartford Machine Screw Co.—The new Hartford drafting system in operation on a 36-spindle machine. The principle feature of this system is the splitting up of the bottom rolls into short sections, with each section feeding two spindles. This unit system is said to simplify bottom roll problems and alignment problems. Each unit can be removed for repair or replacement without stopping the frame.

Norlander-Young Machine Co.—A sample 40-spindle completely anti-friction spinning frame.



Roberts Co.—The new Roberts 25-inch spinning frame.

sary to change the roller settings, the position of the top rolls will remain directly over the bottom steel rolls. This is accomplished by being able to adjust the top spring mounting by a set screw. Where revolving clearers are used, they are held in place by clips on the arms. This is a new product that has been developed recently by Whitin, therefore I am unable to give any definite life of the top roll or replacement.

Roberts Co. had on display one of its 25-inch frames. As I see it, there are a lot of advantages in this frame. To name a few: (1) The head of the frame consists of 30 greased-for-life ball bearings of one size, and all plain bearings and studs are eliminated. (2) All gears in the head are hardened and have one pitch, one width, one bore and one-width key. (3) The gears are set at a 20° pressure angle for greater strength and require only two wrench sizes to fit all shafts and tightening points. (4) Chain sprockets are also hardened. (5) Drive for the middle and back rolls comes directly from the large intermediate gear shaft through a silent chain drive instead of in the conventional fashion of drive from the front roll spindle. This permits varying the draft constant from 400 to 3,200. (6) A one-shot-a-day lubrication system built into the head provides a small amount of metered oil for the gear teeth, worms and chain. (7) Roberts ball-bearing spindles are used and require no oiling except for the two drops of oil every three to five years. Also built into these spindles are small whorls, which means reduced cylinder speeds and lower horsepower consumption, increased life of cylinders, bearings, tape tension pulleys, and tapes.

These frames are equipped with umbrella creels; and the frame at Greenville had a 12x7 inch roving in the creel, making 30/1 warp yarn, drafting 45. This frame was a 3½-inch gauge, 12-inch bobbin with an 11-inch stroke. The Roberts 25 frame is made from 3-inch to 4½-inch gauge and for direct filling on an 8 to 8¾-inch bobbin; on the warp up to a 3-inch ring and a 12-inch bobbin.

Roberts offers four different top roll arrangements with the double apron drafting system. Ball bearings and center suspension are featured in three of these, and no-oil cap bar and saddles in the other. (1) Complete ball bearings for all three lines with spring weighting employed. (2) Complete ball bearings for all three lines with dead weight used. (3) Ball bearing for the front roll and no-oil cap bars and saddles for middle and back lines with the use of dead weights. (4) Complete no-oil cap bars and saddle system for all three lines with hardened and ground steel top rolls.

The Bouligny Co., a division of R. H. Bouligny Inc.—The Bouligny Tru-Draft spinning system complete from roller beam up, with drafts up to 50.

O-M Spinning Machine Mfg. Co.—OM-S super high-draft spinning system.

Standard features of this frame included ball-bearing spindles, built-in suction cleaning, Aero creels (Roberts' name for umbrella creels), and 8-inch cylinder drives.

Another great advantage of this 25-inch frame is floor space, which is a valuable item in any plant. Five of the Roberts 25-inch frames can be put in a 25-foot bay and still have a 30-inch aisle, where normally only four frames 39 inches wide will go in a 25-foot bay with a 30-inch aisle.

Saco-Lowell has also developed a center suspension for top rolls which is called the Tru-Set. This is also similar in design to other makes of center suspensions on the market. They use springs for weighting the three top rolls, but the basic difference that I see is that the front top-roll saddle pivots around an anti-friction set, which allows the front roll always to align itself over the bottom steel roller. The pressure on the front roll is 33 pounds; at the bite of the middle roll, 22 pounds; and on the back roll, 21 pounds. The pressure cannot be changed on any roll except by using a different spring.

The Japanese O-M Spinning Machine Mfg. Co. had its OM-S super high-draft spinning frame on exhibit and in operation. Basically the drafting zone consists of two spinning drafting elements; that is, a common roll over a steel roll, then through a double apron, through another common roll over a steel roll, through another double apron, and then the front roll, which is a common roll over a steel roll.

The Japanese claim that the OM-S frame will handle staples up to three inches on both cotton and synthetics and drafts up to 700. Yarn counts from 12/1 to 105/1 have been spun on this frame. As you probably know, the finished drawing is put directly into this frame and yarn spun from it. The drawing cans are approximately eight inches in diameter and 28 inches deep and hold three pounds of drawing sliver. These cans are set in the center of the frame, and there is a sliver guide roll that pulls the sliver out of the can and lets it fall directly in line with the drafting element.

Discussion

Professor Grover: For some years now we have included in our class instruction the Avon system, which is now the same system the Japanese are using. It is merely a double Casablanca—two sets in sequence. It was advertised some years ago by the Avondale Mills as the Super System. It is merely a modification of the Casablanca system, which you have described. Are there any comments from the floor?

Mr. E: I think it boils down in these new spinning systems to which is the better, the self-aligning top roll or one which is held rigid, and to the other comparison in the weighting system, whether you want a dead weight or a spring weight. I think that is the chief argument. I cannot make up my mind which is the better system. When you talk to the manufacturers of one system you get convinced that theirs is it until you talk to the manufacturers of the other.

Mr. Grover: As to the question of which is the better I certainly wouldn't know how to answer, any more than you do. It probably boils down to which is better for you. It boils down to an engineering problem.

The weighting system we don't know too much about. We do know that in synthetics we need more weight, and as we go to longer draft we need more weight. Those are things that always give trouble, but you can get trouble with the old cap bars too. In one mill they had six overseers in a period of six or eight months because they were having trouble, and they finally found it was due to the cap bars. I am sure you have had your troubles with cap bars, too.

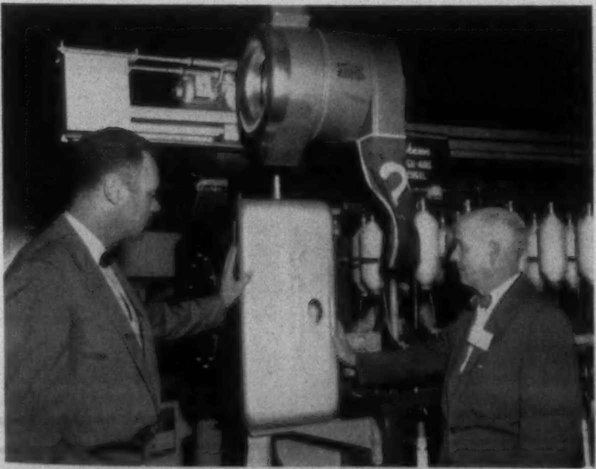
I think the interesting thing Mr. Rhinehardt brought out is that we are getting better bearings than we did. Textile machinery was being furnished with second or third-rate bearings. The machines had to have too frequent oiling, causing dirty work, spots on the covers, and so forth. I think we pay enough for textile machinery to get first-class bearings.

Mr. F: With the increase in drafting in the spinning, all the manufacturers are still trying to sell us long draft in our roving frames. It seems to me it is unnecessary.

Mr. Grover: Perhaps I might make a comment on that. I don't see how you fellows do as good a job as you do. We have a German spinning frame here which spins directly from the sliver, but we haven't done too much work on it. It is a very interesting frame, also. The manufacturers I think probably will get out of that difficulty very neatly by changing the name to controlled draft—not change the machine but change the name.

When you come to any textile process such as roving or spinning—and, of course, weaving too—your rate of production is almost in proportion to the size of your product. If instead of running one hank we can run a half hank we will double our production, cut down on floor space, and everything else. I presume that we shall soon get roving frames which will be much more efficient than those we have had in the past. An 8" roving frame would not produce coarse roving satisfactorily; it was not designed for it. If you took a coarse slubber and cut it down to run .4 hank it would not do a good job.

The next report will be on new machinery and devices for warp preparation and weaving and will be given by Olen F. Marks, of the textile school staff. Mr. Marks is in charge of the department of warp preparation and weaving.



The Bahnson Co.—Vacuum cleaning systems.

Warp Preparation And Weaving Equipment

By Olen F. Marks

In the equipment for weaving and warp preparation there were some very interesting items in Greenville. I will try to cover the various phases.

There were four filling winders on display. Abbott Machine Co. had an automatic quiller with a device for placing the bobbins on the pinboard, as we have been accustomed to for years; and it also had an automatic bobbin stacker for the Draper loom. In addition to that it had the regular box.

The automatic stacker attachment is new. It is so designed that only the full bobbins or nearly full bobbins are placed in the stack. All the partly full quills are dropped separately, which eliminates the trouble you have had from partly full bobbins going into the boxes. Draper and all the

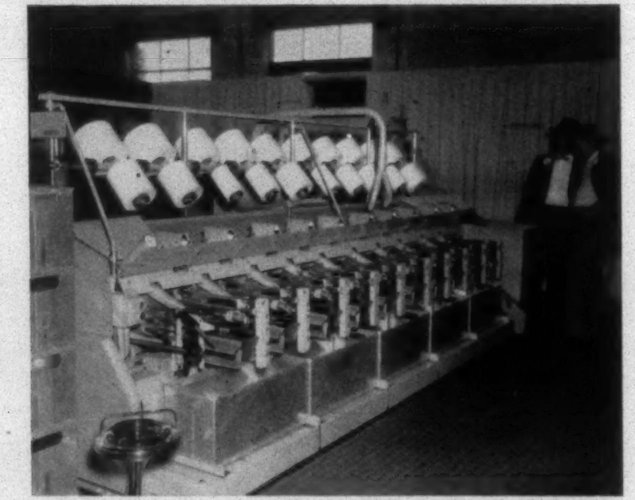
Foster Machine Co.—The new Foster-Muschamp Model 66 automatic filling winder. An automatic pinboarding attachment (for filament yarns) and an automatic filling box stacker (for spun yarns) were shown in operation on the same machine at the same time, emphasizing the flexibility of the unit.

Abbott Machine Co.—Model II automatic quiller.

other companies are working on this and doubtless will come up with stacker attachments for their looms shortly, but so far only Abbott has it.

The next machine is the Whitin-Schweiter, 10,500 r.p.m. shown by Whitin Machine Works. You can slow the spindle down if necessary. It is no longer necessary to change the cams. Formerly it was necessary to take the cam off, which was a very tedious job to do.

The Terrell Machine Co.—Type M roving bobbin cleaner.



Scharer Textile Machine Works—Fully automatic high-speed bobbin winder.

Another feature is the cleaning. The machine has a dust-removing device and is self-cleaning. The cone or the package of yarn and the tension are enclosed, and by air current it is kept clean at all times. The machine, they claim, will give very good service.

The third winder was the Scharer, which is made in Switzerland by Scharer Textile Machine Works. It runs at 11,000 r.p.m., and the speed is easily changed. It is also enclosed. One feature I liked about this machine is the self-cleaning tension. It has the double tension, and the two discs are revolved by the yarn passing over a roller. At all times it assures you of a very clean tension device, which eliminates pulling out bobbins These bobbins are stacked into boxes. The boxes can be taken directly to the weave room, or if necessary the bobbins can be set into the box.

The machine has an interlocking stroke and wind, which they say prevents slough-offs. That is new to us, but they claim it is better than the American. They also manufacture a full line of winders for synthetics.

The other machine was of German make—Schlafhorst, shown by The Terrell Machine Co. It has a speed of 10,000 to 12,000 r.p.m. and was operating there at 11,000. That has been operating in a number of mills in this country. I know last year I saw this machine in operation in a mill in Spartanburg, and the people there were very pleased with it.

There were four warping machines on display. The first I shall take up was shown by Allen Beam Co., which has a 40-inch beam. The speed is 600 yards per minute. The makers claim it will hold 1,140 pounds of cotton yarn per beam. The pressure on the beam is precision-controlled, from five to 300 pounds; and they say you can get any pressure you want. Please remember, however, that it is a cotton machine. Don't put your nylon on it and apply 300 pounds of pressure. This machine was very well built, looked to be easy to doff, and was a very substantial machine.

The next machine is one built by the Kidde Mfg. Co., with 36″ beams, weighing 9,000 pounds, and occupying a floor space of 93″ x 100″. It was driven by d.c. motor by belts. You can put up to a 40-inch beam on it. The doffing is very easy. The speed is from 75 to 600 yards per minute. It has an a.c.-d.c. motor generator and controls are inside the

Kidde Mfg. Co.—Kidde-Sipp 54-inch direct beamer.

Cocker Machine & Foundry Co.—Model BW-40C warper.

warper or away from the machine. This machine is a very good one. It is claimed that it is used by a number of yarn manufacturers for the selling of their section beams to the textile trade.

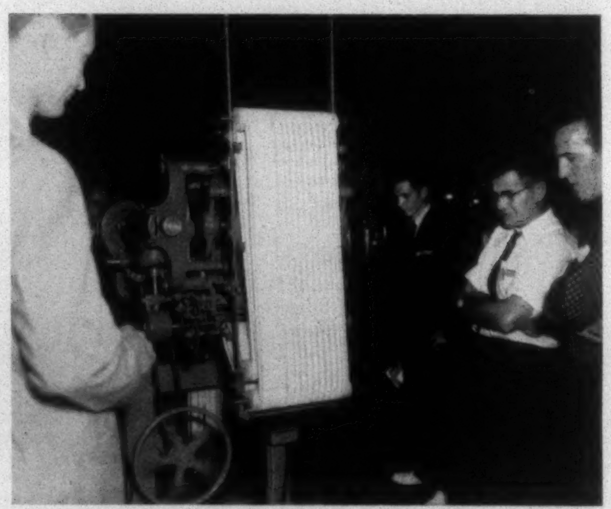
Third was the Cocker warper, shown by Cocker Machine

Barber-Colman Co.—Type DW super-speed warper capable of warping beams with 40-inch heads.

West Point Foundry & Machine Co.—Multi-cylinder slasher.

Southeastern Loom & Machine Works—An automatic loom equipped with electro-magnetic loom drive.

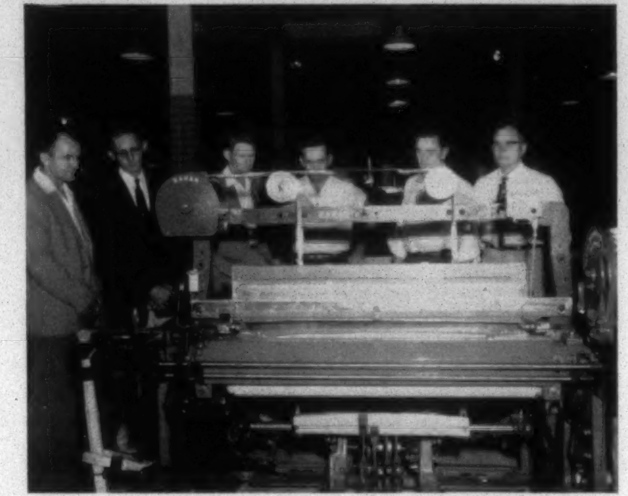
Draper Corp.—A 50-inch X-2 Model loom equipped with a new magazine-type battery and a new pneumatic thread clearer which removes loose filling ends at the battery. The loom was also equipped with a new linkage parallel assembly and a new high roll ratchet take-up (double roll), said to greatly increase the versatility of the X-2.



H. J. Theiler Corp.—A single-cylinder double-lift cam dobby, a modification of the standard Staubli head motion with a standard American heddle lifting motion.

Crompton & Knowles Loom Works—An M-P automatic bobbin changing dobby convertible loom, convertible from 1x1 to 2x1 and vice versa.

& Foundry Co. This machine, again, has a large beam—a 40-inch beam. The machine will operate at a speed of up to about 900 yards per minute. This is a very well built machine. Many of them are being sold to the synthetic people for their 36-inch warps.



Bahan Textile Machinery Co.—An all-Southern loom, designed and built in Greenville, S. C.

H. F. Livermore Corp.—Nylon pattern chain.

American Moistening Co.—The new Amco Heli-Clone loom cleaner, Model LC-1.

The fourth warper was shown by the Barber-Colman Co. It was a 40-inch beam, holding 1,000 pounds of yarn, and running 900 yards per minute. It is sold in three widths, 54½", 66½", and 72½". As to whether or not the other warpers can be purchased in those widths I do not know, but I presume the makers would manufacture them for you. The Barber-Colman machine is very easily doffed and is a very substantial machine.

There were four slashing machines on display. Cocker had a new multi-cylinder slasher there. The feature of this machine is the new size box, the advantage of which is that you can control the amount of pick-up and get good penetration. As the yarn enters the size solution the air in the yarn is removed by air pressure. While the yarn is still in the size solution it is still under pressure by the second roller. That is controlled by the air pressure. Then for removal of excess of size there is a squeeze-roll arrangement. After it passes through that, there is a fourth squeeze roll to eliminate any excess of size that may remain in the yarn. There is the same amount of pick-up at all speeds of the slasher. This was very well received, and we were told that this box is operating on a nine-cylinder slasher in a South Carolina mill on 80-square print cloth and has been operating for some months. Another feature is that only 25 gallons of size are required in the size box. That will give you a quick turnover of size, so the size will not remain in the box very long. The construction is of stainless steel all the way through.

Bachmann Uxbridge Worsted Corp. had its hot air slasher on display. They claim that at present 300 of these slashers are in use. They are sold primarily for cotton, but they can be adapted for synthetic filament. This slasher has the Griffin size box, which has been out for some years.

West Point Foundry & Machine Co. had both the hot-air and the multi-can slasher on display. I asked them which of their slashers they were selling the most, and the answer was the multi-can, due to the fact that you can run anything you get in that slasher.

Now, what about additions for your slashers? Reliance Electric & Engineering Co. had on display a multi-motor drive. That is too complicated to go into here, but I think it would be well for anyone considering the purchase of slashers to investigate it.

General Electric Co. displayed quartz heat lamps for the slasher, which are said to be unbreakable. That company is working with a number of mills today in an effort to develop those. The purpose is to preheat the yarn, which would give you higher speed on your slasher. One of the drawbacks is that it would cost about $5,000 to equip your slasher with one of these quartz lamps. Of course, General Electric says that you would soon make that up by the saving effected.

Now, the looms. The Draper Corp. showed its X-2, with pneumatic clearer and automatic filling magazine. Draper also had an electric stop motion. Up to the present time it has been difficult to find a broken end on a loom equipped with the electric stop motion, but they now have an electrode with feeler fingers which will part the yarn and show you where the break is.

Another development is Draper's scissors-type thread cutter, which is said to last very much longer than the present thread cutter.

Another of their machines on display was the XP-2 wide-sheeting loom. This loom has been on the market and has been tried, and they are now taking orders for it.

H. J. Theiler Corp. had on display a Staubli dobby, a single-cylinder, double-lift cam dobby. This unit is from Switzerland.

Crompton & Knowles Loom Works displayed its filling mixer and multi-covered magazine. The cards are punched by an automatic machine, which makes it easier to put them on your loom.

One of the most outstanding loom features at the show was Universal's Unifil. Universal is now tooling for accepting orders in large quantities. We are advised that they will not be able to install fewer than 200 Unifils.

Lindly Instrument & Machine Co. displayed its yarn inspector, which can be attached to your warper. The firm also showed a yarn-defect analyzer. By means of an electric light and your analyzer you are able to count the number of imperfections in your sheet of yarn. This is being used extensively by the filament-yarn people today. It is claimed that even a broken filament can be detected by it.

This company also displayed its statistical recorder, which can be attached to looms or other machines. One recorder will take care of 50 machines, I believe, and will record the number of stops, the down-time, etc. The data obtained will show which loom has a larger number of stops than others, and then you can go to the loom and see why it is down more than the rest. Of course, you get your seconds from such looms. The firm also had an electronic cloth ex-

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UNIVERSAL WINDING CO., displaying its Unifil loom winder at the Southern Textile Exposition, announced release of the unit for cotton, spun synthetic and filament yarns. The Unifil, which brings the whole process of filling preparation into the weave room and integrates it with the loom, has been under development some seven years. A year ago a limited release was made for filament yarns only, but Universal is confident that the machine is now ready for sale and application to all Model X-series Draper looms. Probable delivery dates quoted at the show were for the second and third quarters of 1957, and initial orders, it was pointed out, must exceed 200 units. Orders for fewer units cannot be taken at this time, it was said, due to the time it takes Universal representatives to complete an installation and supervise the training required by mill personnel.

Reviewing the development of the Unifil, Universal pointed out that four years ago 60 Unifils were installed on Model XD looms in the synthetic division of the Bates Mfg. Co. These units ran for a year and a half on a three-shift basis on filament yarns. At that time, Universal set up its target of performance which the Unifil units had to meet to be economic in mill operation, and came up with a number of design changes. The Unifils were removed from the mill, the design changes made, and 45 units were installed for filament weaving on Model XD looms at Chicopee Mfg. Co., Manchester, N. H., where they ran for another year on a three-shift basis.

Universal Winding Co.—The Unifil loom winder for cotton, spun synthetic and filament yarns.

After approximately three months, and realizing that its targets had been met, Universal engaged Barnes Textile Associates to make an independent study as to the economic value of Unifil to a mill. A few filament weavers were then invited to view the installation and were presented Universal's economic analysis, together with the Barnes Textile Associates' study of the operation. Two sales were made: 500 units to Amerotron Corp. and 526 units to Ponemah Mills, Taftville, Conn. At this point, Universal went into a tooling program leading up to the production of these 1,026 units.

The Unifils were then removed from Chicopee and ten units each were installed at Amerotron and Ponemah for test purposes prior to the filling of their orders. Twenty-four units were adapted to Model X2 Draper looms and placed in Hoosac Mills, New Bedford, Mass., for test and evaluation on cotton yarns, and ten units were placed in Pansy Weaving Mills, Pawtucket, R. I., for test and evaluation on spun synthetics and carded cotton. These test units have been running approximately ten months on a three-shift basis at Pansy and on a two-shift basis at Hoosac Mills.

In June of this year, Universal engaged Barnes Textile Associates to come into Hoosac Mills, study the economic value of these units running on cotton, and submit an independent report. Based upon Universal's study, as well as the Barnes report, the Unifil lom winder is now released for cotton and spun synthetics.

It will be seen from the foregoing that these test units are in their fourth year of operation, two and one-half years on filament yarns and approximately ten months on cotton and spun synthetics, which includes the 24 units at Hoosac that have been running two shifts on 40-inch looms operating at 225 picks per minute. These installations, according to Universal, indicate that the Unifil loom winder has been more thoroughly mill-tested and proved than have been most new developments in textile machinery.

During the three years of testing, Universal has had the opprtunity to investigate the mechanisms for signs of wear or failure to stay in adjustment; when found, designs were changed to overcome any such weaknesses. As a check on re-designed mechanisms, prototype units were built exactly in accordance with the new drawings and were tested in mill installations. As parts came off production tools, these parts were installed in the prototype units and operated under mill conditions as a double check. Universal considers that these procedures, plus the three years of actual mill testing, have completely "de-bugged" Unifil.

aminer, which will detect defects in both warp and filling.

H. F. Livermore Corp. showed plastic risers for gear heads. It is claimed that they are easier to clean than ordinary steel and that the nylon risers will last longer than the steel. Livermore also had on display various other parts for looms.

Discussion

Mr. G: In your slashers, what are you going to do with seven or nine or 11 cylinders when you go to slow motion?

Mr. Marks: You have to maintain the same temperature.

Mr. G: You dry the yarn out, don't you?

Mr. Marks: That's right.

Mr. G: That's my criticism of the multi-cylinder slasher. Doesn't the yarn stick to the cylinders?

Mr. Marks: That was before we had the Teflon coating for cylinders. The yarn doesn't stick to the Teflon coating, but you do dry the yarn out.

Mr. Grover: What happens when you cut a lap off?

Mr. Marks: You are not supposed to cut a lap off. You are supposed to get it off with steel wool on the end of a stick, so as not to injure the Teflon. The spinners are supposed to make good yarn so that the weavers will not have trouble in the warp on the slasher and on the loom.

Mr. Grover: Thank you, Mr. Marks. Our final report will be on quality control and supplementary equipment. It will be made by a fellow professor who is now president of Thomason Textile Service Inc., of Charlotte. He is W. A. Thomason Jr.

Testing Equipment

By W. A. Thomason

At the Southern Textile Exposition, emphasis was put on new testing instruments designed for practical use in mills. Electronic measurement of various properties of textile products from picker laps through finished fabrics has become a reality. Instruments were shown to measure electronically long and short-term variation of picker laps, sliver, roving and yarn; to count neps, slubs and other defects of yarn; to analyze tension on yarn and warps; to count imperfections in fabrics; and to act as a stop motion when certain types of defects are present. Here are brief descriptions of new instruments exhibited:

The Spinlab Port-Ar: This instrument is a portable Arealometer built into a portable 16-pound case as a self-contained fiber fineness testing instrument. No external accessories are needed to determine fiber fineness with the Port-Ar. It weighs and measures the permeability from an eight-gram sample that is calculated in microns equivalent fiber thickness and also in Micronaire curvalinear index. The range of the Port-Ar is three to seven microns equiva-

Edda International Corp.—The Titan preselector and spacer for drawing-in.

Thomason Textile Service Inc.—Thomason electronic lap tester.

The Louden Machinery Co., Monorail Division—The new Louden loom cleaner.

Uster Corp.—The Uster Spectograph.

lent fiber thickness and 2.5 to seven Micronaire index. It is not sensitive to normal variations in temperature and humidity. Therefore, it is no longer necessary to encounter delays by sending samples to a distant laboratory for testing. The buyer can now eliminate the element of a doubt in fiber fineness.

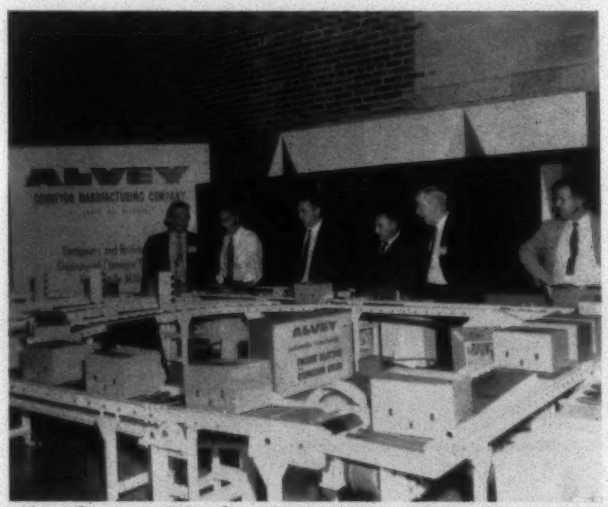
Spinlab Stelometer: The Stelometer is a direct-reading, pendulum-type fiber breaker, designed for determining fiber strength and elongation. A flat bundle, Pressley-type sample is prepared in an especially designed device that allows the operator to accomplish the testing without having to touch the cotton with his hands. Samples can be tested for either 0 or 1/8-inch gauge breaks. Test results can be converted to 1,000 pounds per square inch breaks or to a Pressley index. Elongation is obtained by direct reading from 1/8-inch gauge breaks.

Automatic Micronaire attachment: We had in operation in our exhibit a Micronaire with an automatic attachment manufactured by W. M. Hall & Sons, Belmont, N. C. This automation system consists of a new and larger base for a Micronaire. After the operator weighs the sample, he puts it into the compression chamber and presses the buttons which cause the compression plunger to compress the sample. When the sample is compressed, the air automatically begins to flow through the sample for a sufficient time for the operator to read and record the data from the scale. The compression plunger then retracts, and the sample is expelled from the chamber automatically to be ready for the next testing cycle. A manual toggle switch allows the operator to extend the testing cycle any length of time desired. The automation system is reported to increase Micronaire production by 25 to 40 per cent.

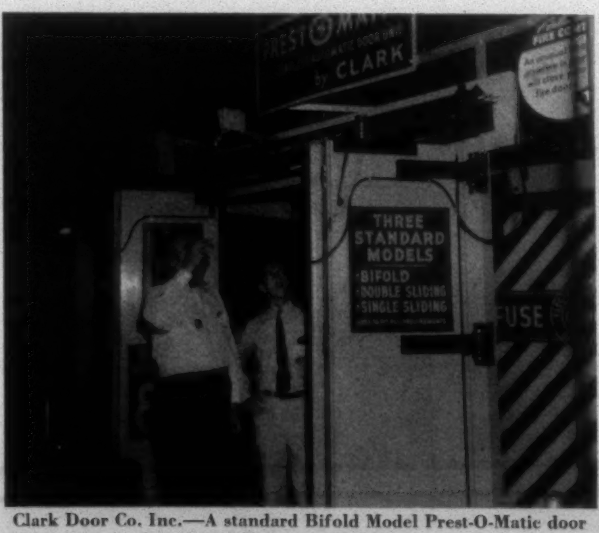
The Thomason Electronic Lap Tester: This lap tester, manufactured by our firm, uses a Uster Varimeter as a measuring head. It is operated in conjunction with a Uster Evenness Tester and a Spectrograph. It has a Veeder-Root yardage counter and a dial which registers weight in ounces. Therefore, during one test, you can get the total number of yards in a lap, the average ounces per yard throughout the lap, the short term variation from the Uster chart, and a

WINNER OF THE CARD CYLINDER FILLET given away by Charlotte Mfg. Co. as a draw prize was Carl J. Beaver, foreman of Plant No. 10, Cannon Mills Co., Concord, N. C. Shown drawing Mr. Beaver's name out of the box is Miss Sylvia Dabbs, staff member of TEXTILE BULLETIN. Looking on are R. P. Bullard, plant manager, and C. A. Spratt, secretary and treasurer, Charlotte Mfg. Co.

The Stanley Works, Magic Door Division—A demonstration of the Stanley Hydro-Magic door operator.

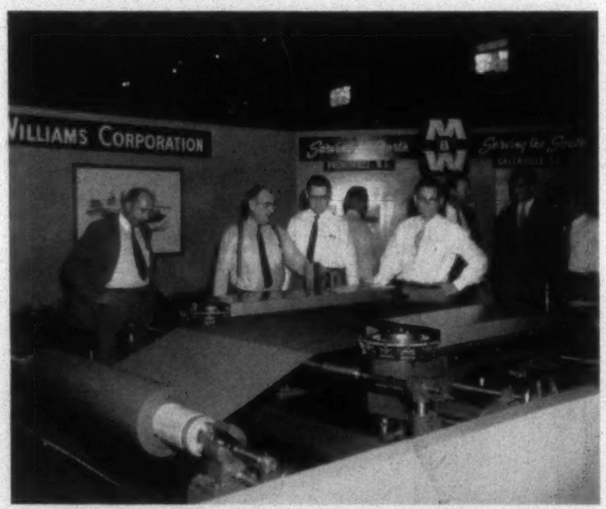


Alvey Conveyor Mfg. Co.—An operating scale model conveyor system illustrating automatic selection and storage of loads and automatic dispatching and merging.



Clark Door Co. Inc.—A standard Bifold Model Prest-O-Matic door unit set up as though installed in a plant doorway.

Trumeter Co.—The standard model Truma cloth examining, rolling and measuring machine, featuring forward and reverse rolling by means of a special free-wheeling apparatus; constant speed of the fabric over the examining table, forward as well as backward; automatic rolling-up arbors; all machine rollers running in precision ball bearings.



Marshall and Williams Corp.—The new M & W tenterette.

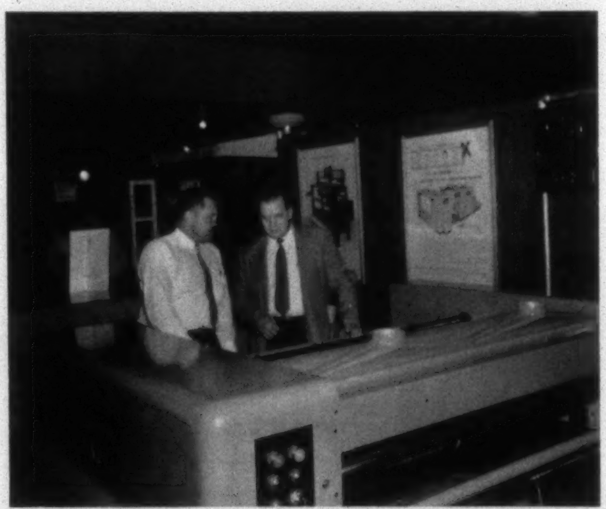
Mount Hope Machinery Co.—An operating demonstration of Mount Hope cloth handling components built into a single system. Feeding from the scray of its continuous roll feed machine, a plaid gingham runs through a set of selvage uncurlers, through precision guides to a vari-bow expander, through a three-roll adjustable expander, through bowed weft and skewed weft straighteners back into the scray of the roll feed mechanism.

spectrogram. From all of this information, you can determine the exact cause of excessive variation, whether it is the result of mechanical troubles or human error.

Uster Spectrograph: The Uster Spectrograph is operated in conjunction with the Uster Evenness Tester, and it permits a quick and accurate determination to help you locate the sources of any mechanical defects. It makes a spectrogram, which is a simple diagram calibrated to show the frequency of periodic variations in yarn, roving, sliver and picker laps. You can even determine how much run-out the front rolls on your spinning frames have from the spectrograms.

Uster Automatic Single-Strand Strength Tester: This tester has been shown before, but it was shown for the first time at Greenville with the automatic bobbin attachment. This automatic attachment holds ten bobbins and will test one after the other continuously. From this tester, you can get single-strand strength, variation in strength, elongation and variation in elongation at one time.

Uster Automatic Hy-Lo Indicator: This instrument is attached to the Uster Evenness Tester. It will indicate, at a glance, the exact number of thick spots and the exact number of thin spots that exceed certain predetermined limits. It can also be adjusted to count neps, slubs and other types



Curtis & Marble Machine Co.—The M-125 vertical brusher and shear were shown as companion machines.

American MonoRail Co.—A Landahl chainless conveyor for continuous power-operated transfer of light loads such as laps, bobbin boxes, etc.

of imperfections. The imperfection count can be interpreted by use of charts furnished by Uster Corp. into yarn grade.

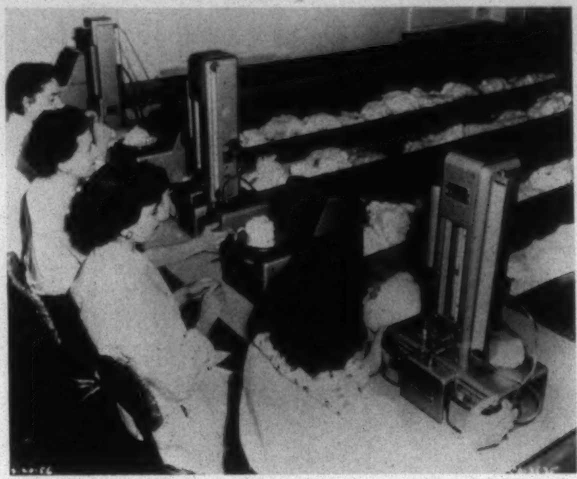
The Brush Imperfection Counter: This instrument is a complete unit for accurately measuring and automatically totaling the number of imperfections occuring in a standard length of yarn. It uses a combination mechanical and electrical counting system, has a built-in timing device, and uses an automatic rewind mechanism. It can be adjusted to count the type of imperfections you want to know about, including neps, slubs, thick places and thin places.

The Brush Tension Analyzer: This instrument is designed to measure tension and variation in tension on roving, spinning, winding, twisting, warping, slashing and weaving. It is said to enable you to set up all of your looms perfectly for the construction so as to get fewer stops and better face. It will help you choose the best combination of shuttle shuttle eye and tensioning components to controll filling tension.

Uster Tension Recordograph: This instrument is similar in design and function to the Brush Tension Analyzer. No literature is available on it yet, but from our observation it will serve the same purpose as the Brush instrument.

Lindly Automatic Yarn Inspector: This instrument is a variable-sensitivity optical and electronic device for measuring variations in yarn diameter on a single or multiple-end basis. With it, you can determine from single yarns any thick or thin places outside predetermined control limits. It is said that you can determine a single broken filament and strip backs in multifilament yarns, neps, fly, double ends, etc. in cotton and worsted yarns. The Southern representative for Lindly & Company Inc. is Karl H. Inderfurth Co., 2842 Selwyn Avenue, Charlotte, N. C.

The Lindly Automatic Fabric Inspector: This instrument is a precision mechanical-electronic device for the inspection of textile fabrics. It is said to reduce to a minimum the degree of human attention and judgement acquired in fabric inspection. It provides for the mechanical detection of raised defects such as slubs, gouts, etc. by adjustable mechanical fingers. Weaving defects, such as mispicks, broken picks, stop marks, etc. are detected by variable sensitivity photo electric device, know as the mispick detector. Signal lights indicate the location of raised defects when the automatic stopping feature of the machine is in use. A recording attachment shows the location of defects. This record can be used for subsequent grading, the establishment of sewing piece rates, etc.



PRECISION COTTON PICKING—Air gauging instruments are giving the nation's cotton textile industry a faster, more economical way to obtain ultra-precision measurement of cotton fiber fineness, one of the most important elements affecting cotton textile production and quality. The new automated Micronaire measuring and fineness classifying device, developed by The Sheffield Corp., is shown here putting cotton fiber measurement and testing on an assembly line basis at Volkart Brothers, New Orleans cotton merchants, where each instrument measures and grades more than 1,500 bales per day. The New York and New Orleans Cotton Exchanges have recognized the importance of the new instrument in improving and standardizing cotton quality by requiring that all this year's cotton future be Micronaire-measured to meet fixed fineness standards.

EVERYTHING'S JAKE—One of the smallest items getting the largest share of attention at the Greenville show was "Jake Jacobs," roving good-will ambassador for The Bullard Clark Co.

The Portable Lindly Automatic Yarn Defect Analyzer: This instrument is similar in effect to the Uster Hy-Lo Indicator and the Brush Imperfection Counter. It automatically detects and counts neps, slubs, fly, double ends, fluff balls and broken filaments. It operates at speeds up to 600 yards per minute and has an automatic stopping device. It uses a photo-electric detection system as employed in the Lindly Automatic Inspector.

The Lindly Automatic Photo-Scanner: This instrument is a detecting device designed to detect minute light changes occuring at a distance from the unit over a given area, either with or without oscillation. One of its applications is its use to detect defects in tricot cloth during the knitting operation and cause the knitting machine to stop automatically when they occur. Any defect occuring in the cloth is detected within one second and the knitting machine is automatically stopped.

Uster Corp. also showed the evenness tester, recorders, integrators and other items with which we are all familiar, and Brush Electronics Co. showed the Brush uniformity analyzer. Incidentally, you may or may not know that Universal Winding Co. is now exclusive distributor for Brush textile instruments.

A single large thread company in America alone turns out, in an average week, enough thread to go around the earth's equator many times.

How Operational Changes at Clinchfield Increased Production by 24 Per Cent

By JACK KISSIAH, Associate Editor

With two side-by-side plants, this mill organization has made changes which are designed to eliminate unnecessary duplications and production-curbing inefficiencies.

CLINCHFIELD Mfg. Co. of Marion, N. C., has made a number of changes in its operations in recent months which have increased over-all production some 24 per cent. Clinchfield has two plants in Marion, both producing print cloths. Plant No. 1 was built in 1915 and is equipped with 600 reworked Model E looms, 300 new X-2 Model looms and some 40,000 spindles. The adjacent Plant No. 2, built in 1917, is about the same size operation, with 1,000 Model E looms and some 41,000 spindles.

As close to one another as they are, each plant was originally laid out, and for many years operated, as separate and distinct units. There were exceptions to this, such as a single starch storage and cloth storage facility for both plants, and these will be pointed out.

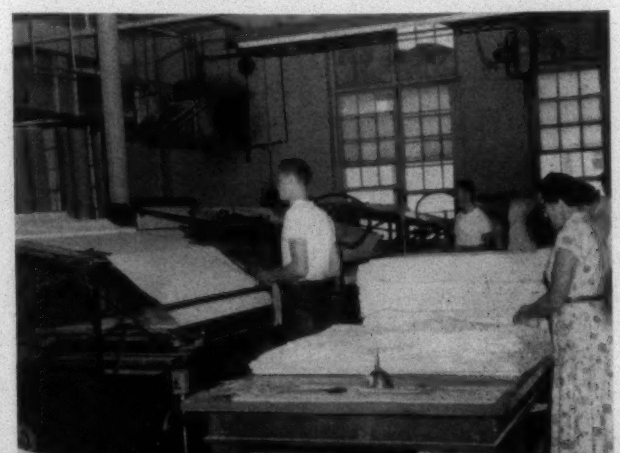
Recent improvements have tended not only to increase production, which would certainly have to be conceded as the primary purpose for the changes made, but also increase efficiency purely for quality's sake. The largest single step taken to boost production was the construction of a single-story addition to the No. 1 weave room. This new, modern wing now houses 300 X-2 Model looms. Subsequent changes and improvements in Plant No. 1 included the complete rebuilding of three Saco-Lowell slashers; the installation of new lighting throughout; air conditioning of the spinning and weaving rooms; and the installation of new type Parks-Cramer overhead cleaners in the spinning room.

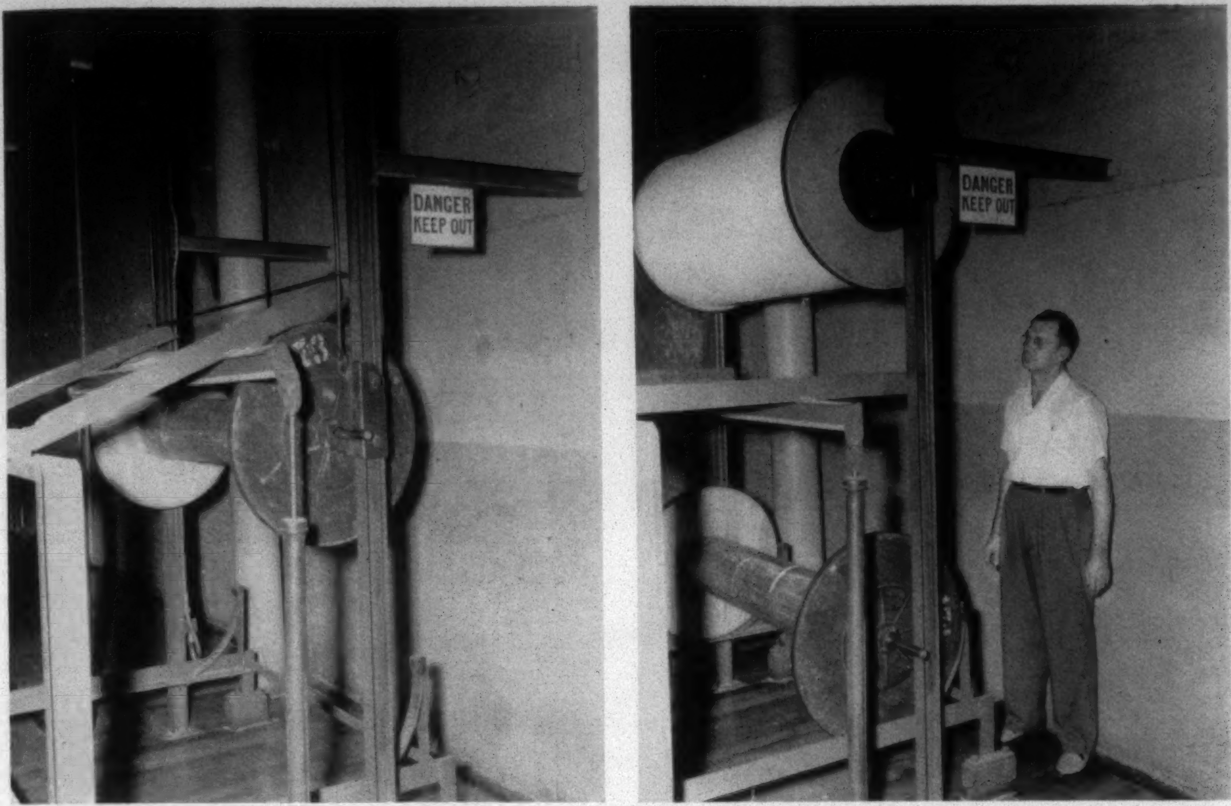
A new supply room has been set up in the basement of the No. 1 Plant in an area where parts and supplies were formerly stored at random and picked up when needed by the various departments of both plants. The new system was installed by Fray Williams, who was subsequently named supply room foreman.

These modernization projects were of the usual order, not unlike similar advances made by other mills. And to this point, all the changes thus cited have pertained to Plant No. 1. Going further into the program, the management of the plant decided to make a number of changes that would affect the operation of both plants. In other words, a hand was turned toward the elimination of unnecessary duplications and production-curbing inefficiencies.

For example, Plants No. 1 and 2 both had machine shops. But, according to John Auerhamer, superintendent, neither was sufficiently equipped to take care of all the work required of them. Logically a simple, completely equipped shop would serve better than two ill equipped ones. Fortunately space was available in the basement of the No. 1 Plant to consolidate the two, although much more than consolidation was effected since many improvements were made and much equipment added in the new facility.

A second example would be that of the supply room for spare parts and accessories. Not too long ago the plant had no such facility. Supplies and spare parts were stored in the basement of the No. 1 Plant in an area adjacent to the old No. 1 machine shop. No running inventory was maintained, and supervisors and overseers merely sent a man to the basement for any part that was needed. And it was up to the supervisors to keep on hand a sufficient stock of replacement parts to carry them through. As supplies reached whatever each individual supervisor considered a minimum


The cloth room in the No. 1 Plant has been expanded to take care of Plant No. 2 as well. Consolidating the cloth rooms has resulted in a marked improvement in efficiency.



Dewey Quinn, overseer of slashing and weaving, Plant No. 2, watches as a beam comes down the vertical conveyor from the spooler room overhead. The conveyor deposits the full beam on the top rung of the storage rack *(left)*, continues on down to the lower rung to pick up an empty beam *(right)* for return to the spooler room.

running inventory, an order was given the purchasing agent.

To bring this up to date, Mr. Auerhamer assigned Fray Williams, a loom fixer, to the task of setting up a supply room that would serve both plants and relieve department supervisors of the responsibility of knowing "what was in the basement." Mr. Williams accomplished the job in a commendable manner, utilizing to the best advantage every possible foot of the space allotted to him. The result is an orderly supply room stocked with from 4,000 to 5,000 items, plus the advantages of a running inventory. Materials are now shelved according to (1) departments, and (2) machine actions. That repair and replacement parts are a major cost consideration can be seen by Clinchfield's figure of $400,000 so spent in 1955.

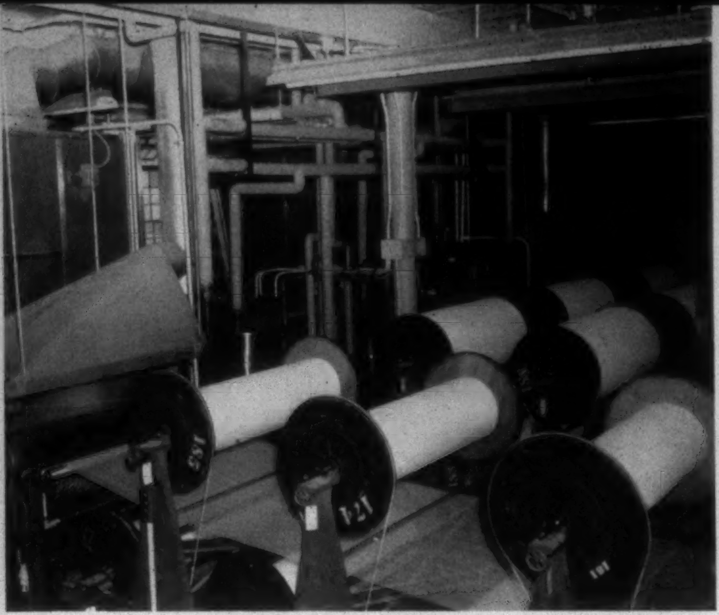
Still another example of inefficiency eliminated was that of starch storage. Previously all starch was received and stored in the warehouse adjacent to the No. 1 Plant. Plant No. 2 had to haul its starch from this warehouse by truck. Only a nominal amount could be transferred at a time since there was no place at or near the No. 2 slasher room to keep more than a few days supply. To get around this, a small addition was added to the side of the No. 2 slasher room, by which there was already a railroad siding. Now starch is received in two car load lots, one car load going to each plant.

A major change was effected when the No. 1 cloth room was expanded to handle production at both plants. This innovation required a significant change in the physical layout of the No. 2 slasher room and tying-in room. Under the old set-up, the slasher room, cloth room and tying-in room in the No. 2 Plant were grouped on the first floor next to the weave room. Moving the cloth room operations to the No. 1 plant increased the area available to the slashers, and two West Point Hot Air slashers were installed, replacing three early model slashers which were considered too old to economically rebuild. These slashers are equipped with the heads from the old slashers, and with umbrella creels.

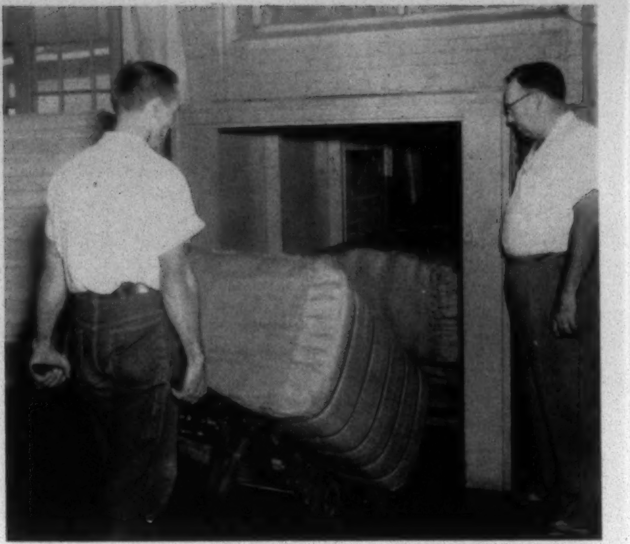
Added also was an overhead conveyor system for transporting loom beams from the slashers to the tying-in room. From the tying-in room the beams are taken by hand truck to the weave room. Rolls of cloth from the weave room are wheeled by truck back into the end of the slasher and tying-in area where two stitching machines are located. From the stitching machines, rolls are sent by outside conveyor to the No. 1 cloth room, a distance of approximately 600 feet. A second conveyor, this one a vertical conveyor, delivers section beams from the spooler room (directly above the slasher room) to the slasher room. Section beams were formerly delivered by truck and elevator.

Getting rid of the No. 2 cloth room provided much needed floor space for the slasher room, and the two new West Point Hot Air slashers have made a big difference in the No. 1 operation. For one thing, Dewey Quinn, overseer of weaving and slashing, points out, the slasher room is about 20° cooler. No figures were available on the increase in efficiency, but about 500 more yards are now being put on the loom beams. A portion of this, however, can be attributed to the new air cylinder take-up mechanisms on the slashers.

Other improvements at the No. 2 Plant include the installation of 28,000 Whitin Super Draft spinning spindles, equipped with Pneumafil. More cards have also been added to permit slowing down of production in the interest of quality. The basement of the No. 2 Plant, which formerly housed the No. 2 cloth storage room and machine shop, is



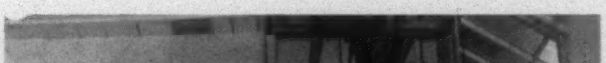
Two new West Point Hot Air slashers constitute a major improvement in Plant No. 2. The slashers use umbrella creels.



A second conveyor in the cloth room leads to the cloth storage warehouse adjacent to the No. 1 Plant. Ray Minish, cloth room overseer *(right)* works the manual controls as a bale is wheeled in place and toppled onto the conveyor.

now vacant, and is only used at times as an area in which to do special maintenance jobs. Of the 1,000 looms in the No. 2 Plant, 600 are equipped with individual motor drives, the remainder being belt-driven. Future plans call for installing individual motor drives on all the looms, as has been done in the No. 1 Plant.

Getting back to the cloth room operation, the delivery from the No. 2 Plant to the consolidated cloth room in Plant No. 1 is effected by an automatic and/or manual conveyor. Two rolls of cloth, one from each stitching machine in the No. 2 Plant, are sent simultaneously in a large steel bin or vault. The bin opens from both ends, and the rolls of cloth are taken from the stitching machines and rolled dolly and all into the bin. Inside they are secured by chain to prevent any movement within the bin during transit. The operator of the stitching machine then has only to push a button to send the bin unattended on its 600-yard journey to the cloth room. Automatic doors at both ends are used when weather conditions are unfavorable. Once the bin reaches the cloth room it stops automatically. The cloth room operator then lowers the bin to the floor with the manual control, rolls the dollies out and puts the



An overhead Louden conveyor system transports the loom beams to adjoining tying-in room. From the tying-in room to the weave room, beams are wheeled by hand truck.

The Louden conveyor system comes into play again when rolls of cloth are taken from two stitching machines in Plant No. 2 and sent two at the time by this cloth vault to Plant No. 1. The vault covers the distance between the two mills, some 600 feet, in a matter of minutes.

cloth rolls wherever he wants them in the cloth room. The bin is then sent back to the No. 2 Plant carrying only the two empty dollies.

After the cloth has gone through the stitchers, burlers, folders, inspection tables and is baled, another conveyor, this one operated manually, is used to transport the bales to the cloth storage warehouse adjacent to the cloth room. This conveyor is unloaded by warehouse operators three times daily—at 7 a. m., 11 a. m. and 2:30 p. m.—and some 65 bales of cloth are sent to the warehouse each day. Ray Minish, overseer of the cloth room, points out that the changes in the cloth room have reduced the cost figure for that operation by more than ten per cent.

These improvements, it was pointed out, do not mark the end of Clinchfield's modernization program by any means. Changes, such as recently replacing three hand-fed boilers with a new stoker-fed boiler, have been made and will continue to be made to keep Clinchfield at its competitive best.

Industry Executives Get Import Situation In Proper Focus At Annual Conventions

If you can momentarily forget facetious allusions to any other part of the animal, and assume that Presidential Assistant Sherman Adams speaks only from the horse's mouth in defining White House policy, the textile industry's import problem is on its way to solution.

That is the conclusion which can be drawn from a series of meetings of textile executives held during recent weeks. First, there was the announcement by Governor Adams of the Eisenhower Administration's agreement with Japanese textile leaders to limit textile exports from that country, this news coming from the Northern Textile Association's convention at Wentworth-by-the-Sea in Portsmouth, N. H. Then, F. E. Grier, president of the American Cotton Manufacturers Institute and a man capable of turning an impersonal banker's eye on anything suspected of being loose talk, made it plainly known that he accepted Governor Adams' announcement as indications of good intention and good faith on the part of the Japanese and of downright determination on the part of the White House.

Mr. Grier interpreted and clarified the Adams announcement at meetings of the Combed Yarn Spinners Association and the North Carolina Textile Manufacturers Association. In the first instance he was an official convention speaker at Virginia Beach, Va., adapting his prepared remarks to the yarn spinners to bring them up to date on what had taken place just previously at Wentworth-by-the-Sea. At Pinehurst, before the North Carolina group, he informally took the floor in extemporaneous rebuttal to suspicions aimed at the Japanese-American agreement by Fulton Lewis Jr., a featured speaker.

Mr. Lewis, who is no less bombastic as a platform lecturer than when offering radio commentary, stated that the Adams announcement did not constitute American limitation of imports from Japan, but was merely a report that the Japanese had voluntarily agreed to a reduction of exports. Further, said Mr. Lewis, no qualifications had been put on the possibility of Japanese exporters transshipping yardage of textiles as a devious means of abrogating any agreement. There was, in Mr. Lewis' remarks, a delicate implication that the American Cotton Manufacturers Institute had been led down a blind alley of wishful thinking on the matter—that the Adams announcement was an of-the-political-moment sop to the domestic textile industry.

To this Mr. Grier said that if the Administration program is not consummated, "A.C.M.I. will be the first to blast it in the future." He remarked that he felt that the best interests of the industry would be served by working together for full accomplishment of the goals set up in the Sept. 27 announcement and subsequent conferences between himself, Mr. Adams and Harold McClellan, Assistant Secretary of Commerce. At this conference Mr. Grier and other textile manufacturers were told a number of things which were indicative of the Administration's serious and determined approach to the problem. These statements by Messrs. Adams and McClellan were necessarily confidential,

Kiser, Rudisill, Rhyne, Maddox, Martin, Dawson

Pictured are officials of the Combed Yarn Spinners Association. They are Ben R. Rudisill of Carlton Yarn Mills, president; Don R. Maddox of Textiles Inc., immediate past president; Arnold Kiser of Sadie Cotton Mills, director; W. B. Rhyne of Howell Mfg. Co., director; J. H. Martin Jr. of Piedmont Processing Co., director; and C. C. Dawson, executive secretary.

because if broadcast they could be harmful to further negotiations.

* * *

Ben R. Rudisill, Carlton Yarn Mills, Cherryville, N. C., is the new president of the Combed Yarn Spinners Association. At the Virginia Beach meeting he was named to succeed Don Maddox of Textiles Inc., Gastonia, N. C. Other officers named were C. K. Torrence of Superior Yarn Mills, Mt. Holly, N. C., first vice-president; and R. L. Stowe Jr. Chronicle Mills, Belmont, N. C., second vice-president. Re-elected were M .T. Cameron of A. M. Smyre Mfg. Co., Gastonia, treasurer, and C. C. Dawson of Gastonia, executive secretary. Elected directors for four-year terms were J. D. Barbee of Burlington Mills, Cramerton, N. C.; J. H. Martin Jr. of Piedmont Processing Co., Belmont; Fred L. Smyre Jr. of A. M. Smyre Mfg. Co.; and W. B. Rhyne of Howell Mfg. Co., Cherryville. Arnold Kiser of Sadie Cotton Mills, Kings Mountain, N. C., was named to a one-year term on the directorate.

Featured speakers at the late-September meeting, in addition to F. E. Grier, included United States Senator Sam Ervin of North Carolina and Ed Lipscomb of the National Cotton Council of America.

* * *

Heiss, Roberts, Jones, Cannon, Marshall

Turning over the gavel of the North Carolina Textile Manufacturers Association to John C. Roberts of Textiles Inc., the new president, is Marion W. Heiss of Cone Mills Corp., outgoing president. Also pictured are Halbert M. Jones of Waverly Mills Inc., first vice-president; William C. Cannon of Cannon Mills Co., second vice-president; and Hunter Marshall, secretary-treasurer.

Now entering its second half-century, the North Carolina Textile Manufacturers Association during the next year will be led by John C. Roberts of Textiles Inc., Gastonia. At Pinehurst Mr. Roberts was elected president of the organization to succeed Marion W. Heiss of Cone Mills Corp., Greensboro.

Halbert M. Jones of Waverly Mills, Laurinburg, was elevated to the first vice-presidency, and William C. Cannon of Cannon Mills Co., Kannapolis was elected second vice-president. Hunter Marshall of Charlotte continues as secretary-treasurer.

New directors, with three-year terms, are: Alex W. Bell of American & Efird Mills, Mt. Holly; Ceasar Cone of Cone Mills, Greensboro; Charles H. Reynolds of Spindale Mills, Spindale; J. R. Meikle of Rosemary Mfg. Co., Roanoke Rapids; R. W. Twitty of Marion Mfg. Co., Marion; and J. H. Riddle of North Carolina Finishing Co., Salisbury.

In completing his year as president of the association, Mr. Heiss foresaw for the textile industry a golden era based on research and scientific advancement. He advised sound production planning and improved promotion and merchandising programs to keep step with other consumer industries and technical education of more young people in the textile field. He urged revision of the State tax laws, and industrial and political statesmanship necessary to avoid class conflicts and assure wholesome and healthy industrial relations.

Living past presidents of the N.C.T.M.A. who were honored at the Golden Anniversary banquet Oct. 12 included A. H. Bahnson, Charles A. Cannon, Harvey W. Moore, A. K. Winget, A. G. Myers, W. H. Entwistle, W. H. Ruffin, Ellison A. Smyth, R. A. Spaugh, R. L. Harris, R. D. Hall, Hearne Swink, Karl Bishopric, Frank C. Williams, Julian Robertson, Carl R. Harris, H. K. Hallett, E. N. Brower and W. H. Suttenfield. Peter Donald, radio personality, was master of ceremonies at this function.

Can Textile Firms Diversify?

By ROBERT T. LOVE, Arthur D. Little Inc.

Below are excerpts from an address before the textile session of the 25th annual conference of the Controllers Institute of America Oct. 1 in New York City. Perhaps it answers some questions that textile management has been asking.

WHILE recognizing the risk aspects of diversification generally, and for the textile industry particularly, I am of the opinion that it is not only a possible course of action for some firms to take but also a desirable one.

The Federal Trade Commission reports 1,773 mergers and acquisitions between 1948 and 1954, in mining and manufacturing firms alone. The "urge to merge" is certainly a common facet of business thinking today. The principal underlying motive for undertaking diversification has been to foster company growth. Diversification has been successfully employed to offset declining or vanishing markets, to offset declining profit margins or an unfavorable geographic location brought about by changing economic factors.

Successful application of diversification to business problem solving is typically seen when growth products are selected which are closely allied with major company strengths and long-term company policy. A textile firm having defined its problem and considering non-textile diversification should audit the strengths or resources that it can bring to bear on a diversified operation.

In making an audit, many firms will find resources which can be successfully and constructively applied to non-textile activities. Textile manufacturers have a general conceptual understanding of manufacturing processes which put raw material in at one end and take finished goods out at the other. Cost systems, materials handling, labor relations, plant layouts, warehousing and inventory control are just a few of the areas of production which might carry over to many non-textile activities that might be considered.

A former textile finishing plant superintendent, now the production manager of a metal working firm, found he knew a lot about metal production, but had to overcome the obstacle of a new language. He found processes the same, but called by different names. Financial experience can be applied in new ventures. Sound accounting practices, developed by many textile firms in the face of a strong price competition, can be implemented in cost-control systems to insure maximum efficiency in the new operation. Many firms have developed cost-cutting procedures through improved materials handling methods.

Through established credit lines, textile firms may be able to supply financial requirements of promising firms which, by virtue of their rapid expansion, are under-financed and unable to get the working capital needed to meet market opportunities. Losses sustained in recent textile activities may be turned to advantage through diversification, which some firms realized in 1953 and 1954. For federal income tax purposes, these losses can be used as a deduction from future income if they have not been applied against past income. Use of these deductions means that profits from the diversification program are tax free to the extent of the losses. The greater the anticipated profits from possible diversification, the greater the weight which can be given these losses.

Opening, Picking, Carding & Spinning

National Spinning Co. Finds a Happy Home for Southern Plant in Washington, N. C.

By JAMES McADEN JR., Editor

Plop a high-quality spinning mill in a town which has never before seen a textile plant, and what happens?

IN the early days of Southern textile manufacturing there were three things you did if you were starting a mill: (1) you shied away from yarns or fabrics which were in any way complicated and you concentrated on products which were of relatively low quality; (2) you put your mill in an area which presented a minimum degree of weather hazard; (3) because you had understood the people on the coast could not easily adapt themselves to the routine of manufacturing, you located well inland.

But, this is the middle of the 20th Century which has witnessed the transfer of a large segment of the woolen and worsted industry to the South, the manufacture of fine-quality yarns and fabrics without anyone raising a lint-covered eyebrow, and the location of mills of varied production in areas inhabited by people who once couldn't tell a spinning frame from a loom.

National Spinning Co., with headquarters in New York City, originally was a yarn supply house catering to the needs of outerwear knitters throughout the country. Subsequently National Spinning branched out into yarn production with the purchase of a plant at Jamestown, N. Y. The Leff family, which operates National Spinning, wanted

Exterior view of National Spinning's plant in eastern North Carolina. It is windowless, completely air conditioned and adapted to expansion whenever necessitated.

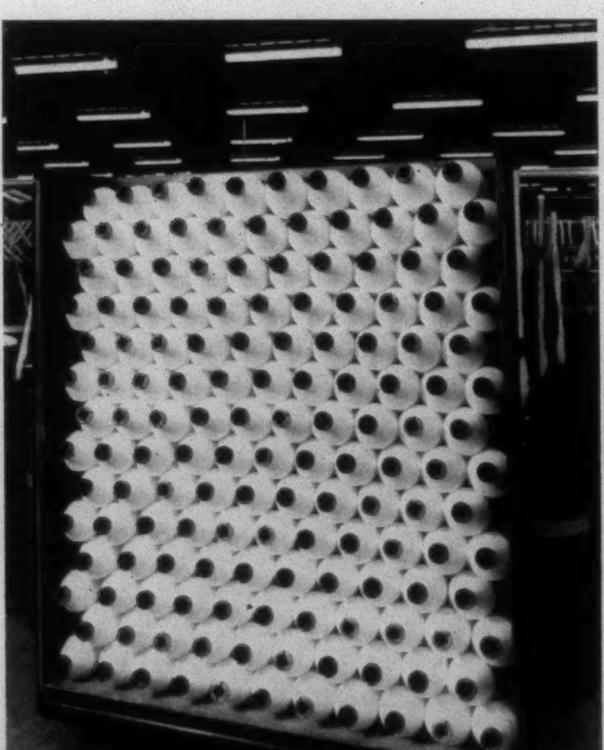
to be a quality supplier not dependent on a variety of yarn sources where manufacturing controls were just as variable.

The manufacturing venture in New York State was successful, and subsequently created a greater demand from yarn customers than that plant could supply. Several years ago the Leffs began thinking in terms of a plant in the South. They were contacted by the North Carolina Department of Conservation and Development, which put them in touch with officials at Washington, N. C., the historical seat of Beaufort County located at the point where the Tar River becomes the Pamlico. Pretty far East for a textile plant.

Civic leaders in "Little Washington" wanted an industrial payroll, and National Spinning wanted to locate in a friendly atmosphere. This thinking resulted in the completion 2½ years ago of an entirely new, modern plant with about 4,800 spinning spindles for the production of worsted-system knitting yarns.

The machinery is housed in a one-story, completely air conditioned building. Processing equipment has been arranged to provide a straight-line materials flow in order to minimize costly handling as the stock progresses through the mill. This plant has been successfully producing yarns made of fine wool, Orlon, Acrilan and some other synthetic fibers.

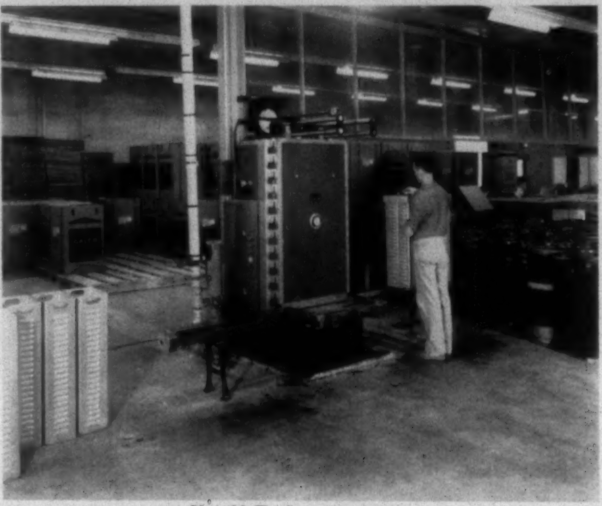
Equipment, in the order used, is: Turbo stapling; three operations of Warner & Swasey pin drafting; Saco-Lowell F-5 roving; Saco-Lowell SS-4 and SS4-G spinning; Whitin Model R twisting; Foster 102 and Universal 44 Roto-Coner winding; and Lindsey-Hyde reels.



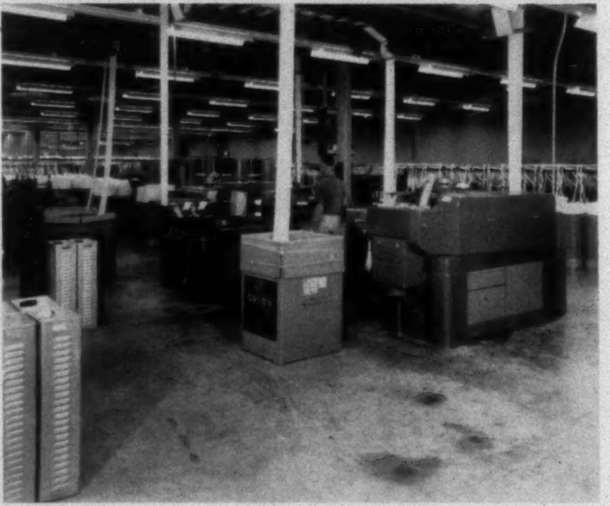
A novel but efficient system for handling roving at the National Spinning Co. plant in Washington, N. C., is this vertical single-row packing.

Quality Control Paramount

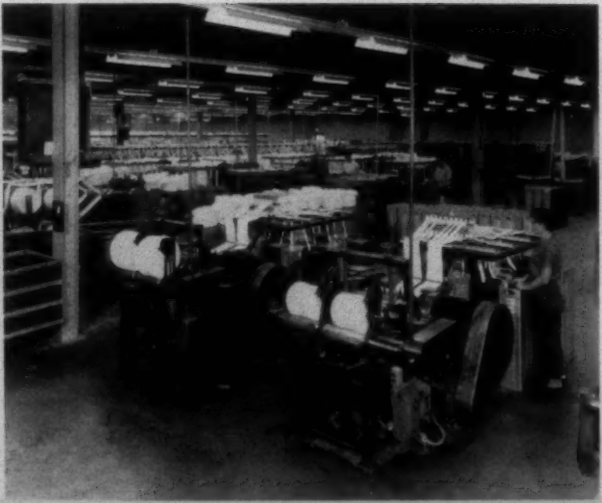
This mill manufactures both single and ply yarns which are shipped to knitting customers on cones or in skeins. Since yarn is spun for the high-quality and style-conscious



No. 60 Turbo yarn setter.

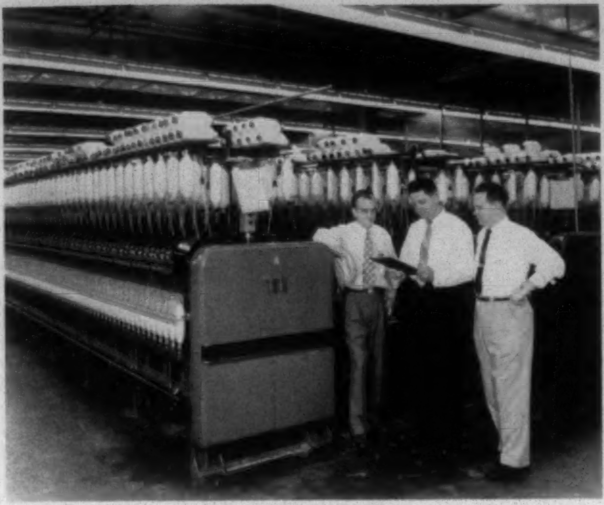


Turbo staplers.



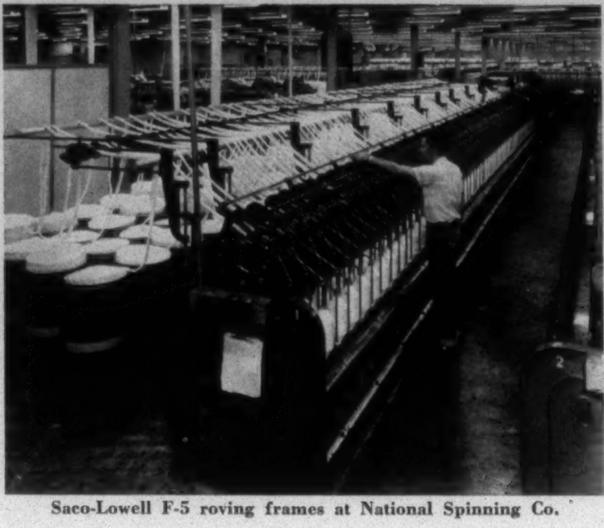
Warner & Swasey pin drafters.

Steps in the preliminary processing of acrylic yarns at National Spinning Co., Washington, N. C.



Roy, LeMaire, Lindley

Responsible for operations at the Washington, N. C., plant of National Spinning Co. are Gerard Roy, superintendent; Leon LeMaire Jr., general manager; and Russell Lindley, office and personnel manager.



Saco-Lowell F-5 roving frames at National Spinning Co.

knitting trade, every precaution is taken at National Spinning's plant in Washington to assure the best possible product. This requires, naturally, thorough supervision and careful maintenance. For this task the Leffs chose Leon O. LeMaire Jr. as general manager at Washington, and Gerard Roy as superintendent.

In the Washington plant there is a well-equipped testing and quality control laboratory. To back up management's understandable fetish for quality, the company's sales representatives consistently go out among customers and actually ask for complaints. Even minor ones are given immediate attention at sales offices in New York and Cleveland, Ohio, in the warehouse at Brooklyn, N. Y., and at both mills.

Mr. LeMaire is a practical mill man who played semi-pro baseball when on his first textile job in Providence, R. I. After winning a scholarship from the Rhode Island Textile Association he studied textile manufacturing at night for six years while continuing to work during the day. His career took him to Paragon Worsted, Collins & Aikman and National Spinning at Jamestown before he was appointed to the position at Washington.

The coastal plains plant has 120 production workers on three shifts, six days a week. Sixty per cent of them are women. Key men were brought in when the mill was started up, but now section hands are appointed from the ranks of native employees.

Good community relations are viewed by National Spinning officials as a good foundation for quality production. The company has sponsored a room at the new hospital in Washington. It supports a Little League baseball team and participates in the local bowling league. An unusually fine morale prevails among the men, who enjoy fishing trips, football week-ends and other recreational pursuits together.

Mr. LeMaire is most outspoken as to the quality of employees in eastern North Carolina. He represents them as both capable and willing. During the late Summer and early Fall of 1955 three hurricanes sideswiped Little Washington. One flooded the downtown area. Despite travel difficulties encountered by employees, very few found it impossible to get to work and the mill ran on schedule. "They wanted," says Mr. LeMaire, "to get here."

Good quality yarns, in the eyes of National Spinning's management, can always be improved. Auxiliary equipment is being employed so that standards can be raised even higher. Spinning frames are equipped with Pneumafil; roving frames are being equipped with Pneumastop; Pneumaclear is being put on the pin drafters; the plant's spinning frames are getting installations of American Monorail overhead cleaners.

And, as a hedge for possible—and probable—future expansion, one wall of the building is of temporary construction.

A view of the spinning room at National Spinning Co. This unretouched picture is indicative of the excellent housekeeping practiced at this plant.

A Manual for Testing Procedures

By GUS GUGGENHEIM—Part Three (Card Sliver Weight Control & Nep Counting)

Apparently nothing pays efficiency dividends like installing the proper controls on card production. Here is one way to accomplish it.

CARD sliver weight control is accomplished through use of a simple procedure and the most rudimentary equipment. Yet the proper execution of the test may mean a considerable addition to the over-all efficiency of the modern cotton processing plant. The importance of the sliver weight control increases as the number of doublings decreases. The result of doubling is to even out thick or thin places by throwing together many ends which may or may not contain thick or thin places. Thus, one allows the work to be processed by relying upon chance to insure evenness. With the proper use of sliver weight control, evenness is insured in a positive manner and reliance on chance, through doublings, is no longer necessary.

Card sliver weight may be controlled using a common grain scale or quadrant and a roving reel. To assure an accurate average weight for each card five samples of five yards in length are reeled off. The five-yard samples are weighed on the grain scale. Add the five weights and divide by five for the average weight. in grains per yard.

Care should be taken when gathering the samples and during reeling and weighing to avoid stretching, dampening or otherwise distorting the length or weight of the sliver. Due to the obvious fact that the card wire naturally picks up fiber at an abnormally high rate immediately following striping, samples for weighing must not be taken less than half an hour or so after striping. Of course, where standard conditions are not available, it may be well to allow the samples to stand in a particular place around the drawing or roving frames for several hours before weighing. If the samples taken on successive days or weeks are allowed to stand in the same spot for several hours a more nearly accurate result is obtained.

Records kept on the average weight per yard of the card sliver for each card will be most valuable. Records may also be kept to determine if the sliver weight of several different makes of card is the same. Other helpful records may be kept comparing the weights of all cards running any particular blend of stock, and for all the cards in the entire card room.

Card Fly Waste Control

Card fly waste is difficult to control. However, it will be found highly renumerative to control card fly waste assuring removal of the proper percentage of short fibers while, in turn, leaving the longer desirable fibers in the stock being carded. Loss of good fiber in the fly waste is quite a costly item and should not be overlooked.

To perform the card fly waste test on a single card, the tester should remove, very thoroughly, all fly waste from the card. The card is then run for a period of not less than two hours. During this period the card should remain in constant operation with a normal amount of stock being fed and delivered. At the end of the test period the fly waste incurred during the test period is carefully removed and placed in a paper bag or other suitable container and taken to be weighed. When the fly waste weight has been determined, to the nearest 0.1 ounce, it is divided by the total number of ounces processed through the card during the test period. This result is multiplied by 100 per cent and the percent card fly waste has been determined.

The test should be run on a regular rotating schedule so that each card is tested within a given period of time. This makes possible an accurate means of determining which cards are producing fly waste at the proper predetermined rate, thus segregating the cards which are allowing too many short fibers to be retained in the web as well as the cards which are throwing out an excessive amount of good fibers. Immediate corrective measures should be undertaken when one or several cards are found to be producing fly waste at an improper rate. However, the first step which should be taken is a re-test of the percent fly waste.

As was stated at the outset, card fly waste is difficult to control accurately. While the gains to be made indicate that an active control program will be well repaid, too close limits on the standard percentage should not be set. Some mills consider their fly waste under proper control when the fly waste falls within plus or minus 20 per cent of the standard percentage.

Card Flat Strip Control

Control of the weight of the flat strip is another tool in use to assure the card is not taking out good fiber while the stock is being carded. This is another case, as was seen in fly waste testing, where a control of weight can prove highly lucrative, but on the other hand a control program will defeat its own purpose if the limits set are not realistic.

Assuming two cards have the same weight lap fed at the same rate but different weight flat strips, it is obvious that a difference in sliver weight will be the result. Flat speed also has an important bearing here, but will not be taken into consideration at this time. Flat settings may easily be checked by study of the weight of flat strips. Card grinding practices on each of the shifts and from section to section may be standardized into one proper procedure.

As in the case of previous tests discussed the test for weighing card flat strips is very simple. With proper respect to accuracy, the flat strip weight should be an average of at least ten flat strips. Simply weigh a group of ten flat strips from one particular card and divide the result by ten. Thus, the average weight for the flat strip is determined.

In order to secure a group of ten flat strips, the tester must first remove the pile of strips from the front of the card.

Care should be taken to remove, cleanly, the last few strips made by breaking the strip along the thin line which separates one strip from the next. After ten flats have passed the flat stripping comb, the ten flat strips are broken off, rolled up and placed in a paper bag or other suitable container.

Several cards may be tested at one time if the test is started and stopped successively. The number of cards which may be tested will depend on the ability of the tester and the speed of the flats.

After the ten flat strips are collected and placed in a suitable container they are taken to the scales or balance and weighed. It is not necessary to attempt to weigh the flat strips with accuracy closer than the nearest grain. After the test has been completed the weight of the flat strips is expressed in terms of grains per flat strip.

Nep Control

The subject of nep control is highly important to the cotton processing plant. Probabaly no single yarn characteristic has as much bearing on fabric appearance as neppiness. However, neps not only affect fabric appearance but also influence yarn strength, and naturally the spinnability of the yarns.

The importance of neps is a relative sort of thing. For one mill 25 neps per grain may be quite acceptable. Another mill may find that when the card web yields over five neps per grain the fabric quality begins to sag considerably. Whichever the case, a sound and realistic standard nep count should be set up and controls should be applied which insure that the standard nep count is upheld on all cards.

Some factors which influence the setting of standard nep count are, as follows: (1) Cotton staple length, grade, fineness, maturity, ginning practices and growing conditions. (2) Running conditions in preparatory phases of processing. (3) Production rates of preparatory phases. (4) Running conditions and production rates of the cards. Card running conditions mean, in this case, condition of wire on flats, cylinder and doffer as well as general mechanical conditions, poundage processed between grindings, quality of grindings, and poundage processed per hour.

Of course any card room man can walk past a card which is making an excessive number of neps and know immediately that the card is doing sub-standard work. However, for an accurate measure of just how much sub-standard the work is and a permanent record of the particular card's performance week after week and month after month, nep counting by the following method (or some similar and probably equally as good) is necessary.

To get an average nep count which is accurate, the counting must be done at a time when the card is neither freshly stripped nor operating with the cylinder and doffer clothing in need of stripping. Perhaps the best time to count the neps, from the point of view of most accuracy, is in the middle of the stripping cycle. This may not be practical, however, and it is well to point out that the count should not be made either immediately preceeding or immediately subsequent to stripping.

Equipment for the nep count is slightly more difficult to make or secure than the testing equipment heretofore discussed. One way to make the test is with a template of ten-inch by five-inch dimentions. The frame of the template may be made often. The frame would enclose a piece of rectangular, one-eighth inch, Plexiglas which is scored with sharply pointed instrument. The scorings divide the Plexiglas into one-inch squares. Also, a similarly shaped piece of Plexiglas, which has no scorings, is to be provided for a top cover.

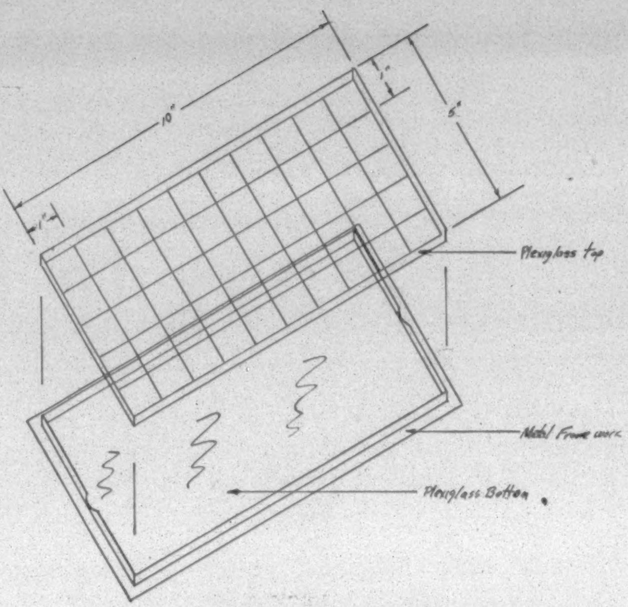


Fig. 1—Template used for counting neps.

The collection of the sample is accomplished by passing the frame of the template through the web (starting from beneath the web) moving in the general direction of travel of the web. The top is placed carefully over the frame and clamped in place. The loose or ragged edges of the trapped web are now carefully broken off in such a manner as to leave only 50 square inches of sample.

The template is now placed over a dark surface which has a dull finish. The neps may now be counted with comparative ease. After the neps are counted and recorded the sample is removed from the frame and weighed to the nearest 0.1 grain. The nep count is now expressed in terms of neps per grain.

The proper identification of neps as distinguished from motes, leaf, immature fiber, naps, etc. is, indeed, very difficult. It is well to point out that the A.S.T.M. manual contains a section devoted to nep identification. The use of this section of the A.S.T.M. manual will be most helpful to people beginning to count neps in the above described manner.

How often should the individual card be tested for nep count? This is an indeterminate question, in view of the fact that every mill represents a different set of conditions. The answer lies somewhere in the answers to the following questions. What is the pounds per hour processed through the card? What type of stock is used? What is the grinding schedule? To what use will the results of the test be put? What other variables should be considered?

A rule which has been found to be successful is for the nep counting to follow the grinding cycle. Thus, the cards are all tested within a relatively short period of time. An adequate control is assured over the performance of the persons responsible for the grinding operation and their supervision. A constant program of spot testing and observation will enhance the previous routine for nep counting cycle.

A Study in Loom Fixing

By FRANK D. HERRING—Part Ten (Stop Motion Maintenance)

Our man Herring, an old-time loom fixer, is insistent on one thing at a time. The stop motion is the subject of this installment.

DROP wires are used to stop the loom off when a warp thread is broken. A single warp thread is drawn through each drop wire, and when the thread becomes broken the drop wire will drop down and make contact appropriate to setting in motion the chain of parts which constitute the knock-off mechanism, and the loom is stopped off, provided all the parts affecting the knock-off mechanism are properly adjusted.

When these parts are not properly adjusted the loom will continue to run, and contact will continue to be made with the drop wire, and this continuing contact, which exerts pressure on the drop wire, will split or crush the end of the drop wire. Once the drop wire is split or crushed it is rendered absolutely useless insofar as stopping off the loom when a warp thread is broken.

When all the warp yarn is depleted from the loom beam, another beam filled with yarn is put on the loom in its place. When this change is made the harnesses and the drop wires are also removed from the loom to be tied onto another full warp beam, and these harnesses and drop wires seldom go back to the loom from which they were removed. So, it is easy to understand why that just one loom allowed to run any length of time with the stop motion damaging the drop wires could be the cause of these crushed drop wires being distributed throughout the entire weave room in a short time. That is one of the direct causes for some weave mills producing so much cloth with intermittent missing warp threads, and in most woven fabrics, this cloth must be classed as seconds.

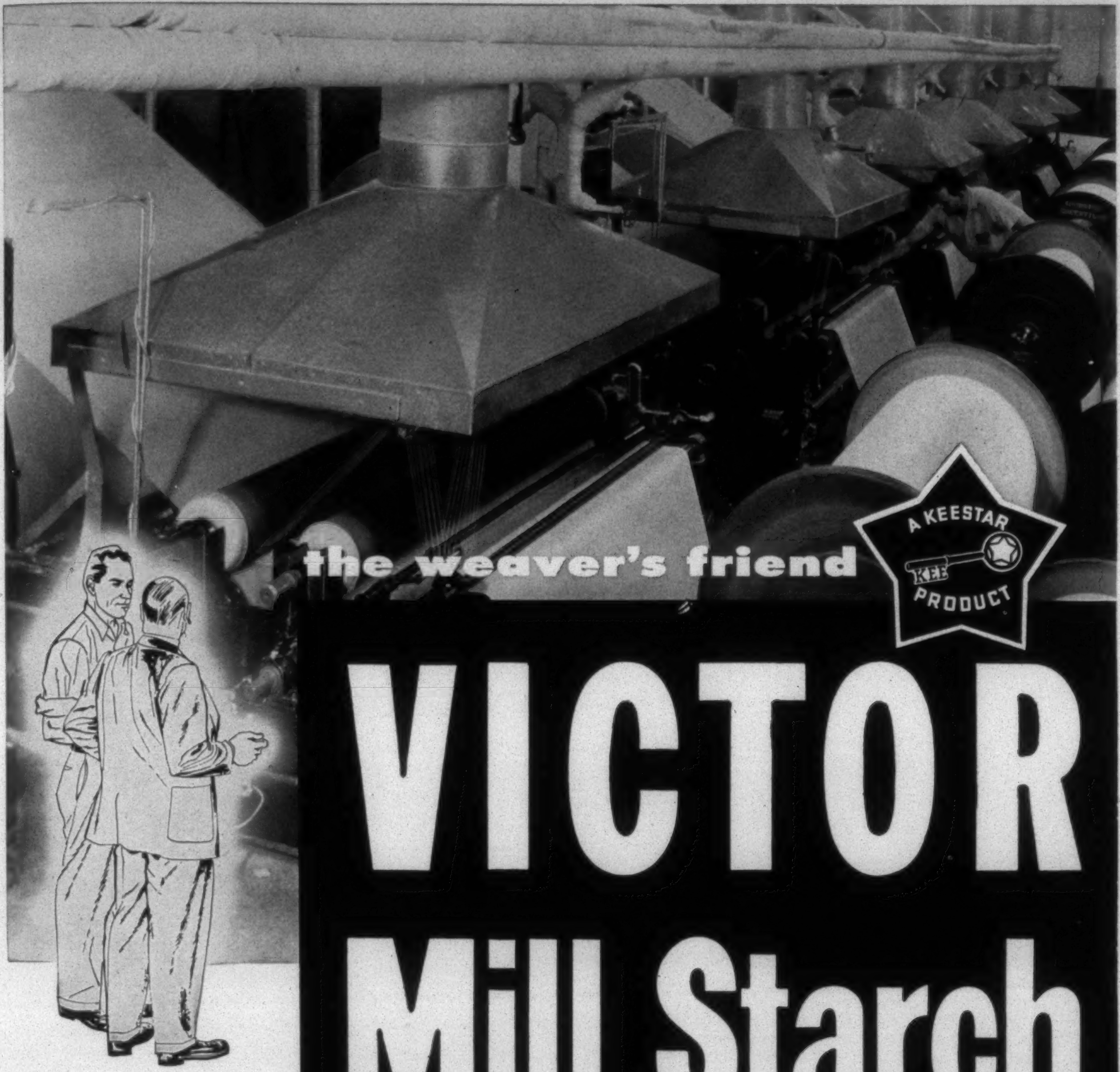
Looms equipped with the electric warp stop motion cannot crush the drop wires, as there is no pressure exerted on the drop wires to actuate the knock-off mechanism, but there are tens of thousands of mechanical warp stop motions in operation today that will do it. At mills where these stop motions are used, the supervisor should inaugurate a checking system to have the drop wires checked every time a warp is changed. This checking system will give double protection against this hazard, because if the drop wires are damaged when taken from the loom the damage can be repaired before they are put back on another loom; and the stop motion on the loom from which the drop wires are taken can be checked and fixed to prevent recurrance of the trouble from that loom.

To fix a loom for crushing, or splitting drop wires, the fixer should proceed as follows, and check the items mentioned in the order named. (*Note:* It is the general consensus of opinion among weave room supervisors that there are more of the Number 8 single thread warp stop motions in use today than any other type on Draper looms; so, that is the one that will be covered here.) There are several adjustments on this stop motion that will cause the drop wires to be crushed if the adjustments are not correctly made. However this is not the case with the later improved sliding bar warp stop motions, with which most of the new looms are equipped.

A good loom fixer will always check the shuttle and the reed when he is called to work on a loom, regardless of what the trouble is with the loom. This is repeated in nearly every article on the subject of loom fixing, because it is so vitally important to keep the shuttle and its component parts, and also the reed in good condition, that it is considered wise to try and get all the loom fixers who read these articles to become shuttle and reed conscious.

To check the No. 8 stop motion all the way through, proceed as follows. Loosen the oscillator cam on the cam shaft, and turn it to the point where the oscillator cam follower rests on the lowest part of the cam; then check the tension on the cam follower spring. The tension on this spring should be just strong enough to rotate the feeler bars back and forth. If the spring is too tight the drop wires will be crushed, or split on the bottom end when a thread breaks and they are caught between the feeler bars and the serrated bars. There are three feeler bars on this type stop motion. The serrated bars are mounted on the bottom, back and front of the drop wire box plates. Next, disconnect the oscillator rod end from the cam follower, and also the feeler shaft connecting rod from the oscillator arm (back), and move the feeler bars back and forth by hand to determine if this part of the mechanism works free of any binding whatsoever. The feeler bars should just clear the serrated bars on the back and forward movements. If the feeler bars are too far away from the serrated bars the drop wires will be caught and bent sidewise when a warp thread breaks and they drop in place for stopping the loom off, and this will have a tendency to crush or split them.

Make sure that the serrated bars fit snugly and in place against the bottom of the drop wire box plate (the serrated bars are held in place with screws). Make sure that the feeler bars are in perfect alignment with the serrated bars, because if they are not the stop motion will stop the loom off when a drop wire is down on one end, and fail to stop the loom when a drop wire is down on the opposite end of the assembly. These adjustments are made by manipulating the feeler bar holder guides, feeler bar holders, the feeler



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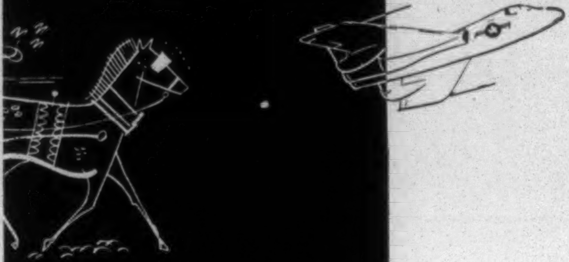

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bar holder links, and the feeler bar holder fingers. These parts are mounted on the feeler shaft.

Next, connect the oscillator rod end back to the oscillator cam follower, and put the cotter pin in place. Then turn the oscillator cam to a position where the cam follower will rest half-way between the highest and the lowest points of the cam, and tighten the cam temporarily; then adjust the oscillator rod end on the oscillator rod to a point where the oscillator finger (loose) will be in exactly level position; then put the oscillator finger collar in place (the oscillator finger collar and the lose oscillator finger have extension lugs on them, and it is vitally important that these lugs make contact properly). The extended lug on the oscillator finger collar should make contact with the lug on the oscillator loose finger on the front side of the lug on loose finger (the front side, pointing towards the take-up roll).

Next, put the feeler shaft spring case spring in place in the case, and in contact with the oscillator loose finger, and adjust the spring so that the lug on the loose finger will be brought into contact with the lug on the oscillator finger collar, and held there in firm contact. This adjustment allows the drop wires to be trapped between the feeler bars and the serrated bars on either of the back or forward stroke of the feeler bars and only have to withstand the spring pressure from the oscillator cam follower spring, or the feeler shaft spring case spring, and if these two springs are properly adjusted the pressure on the drop wires will not be great enough to damage them. But if the extension lugs on the oscillator finger collar and the loose oscillator finger are not making contact properly the drop wires will be subjected to a direct unyielding pressure, and the result will be crushed or split drop wires every time a warp thread breaks and allows the drop wire to drop down into contacting position. Improper positioning of the lugs on the loose oscillator finger and the oscillator finger collar causes more crushed and damaged drop wires than any other one thing on this type of stop motion. And too many loom fixers on sections of looms today are too indifferent to really learn the valuable significance of this setting.

With the oscillator cam follower in position halfway between the high and low points of the oscillator cam, and the loose oscillator finger in level position, loosen the oscillator finger collar and the feeler shaft spring case. Then take hold of the feeler bar holder finger and adjust the feeler shaft to a point where the center feeler bar is in the exact center position of the drop wire box, or in center position between the two serrated bars attached to the bottom of the drop wire box plates, and then tighten the oscillator finger collar and the feeler shaft spring case in position as previously mentioned above.

It will be noted that the oscillator cam, the oscillator loose finger, and the feeler bars have been set, and tightened at the halfway point of their moving radius when the loom is in operation. That is good point to remember about this stop motion, because every moving part in this entire stop motion assembly should be adjusted the same way. The complete knock-off assembly is actuated in its entire movements by the rotation of the feeler shaft through the connecting links all the way through to the knock off oscillator finger and the knock off. Adjust the oscillator arm (back) to a point half-way of its moving radius and tighten it to the feeler shaft. Then, adjust the feeler shaft connecting rod and the feeler shaft connecting rod end to a point where the intermediate oscillator arm rests in level position. Next, connect the oscillator arm connection (front) with the intermediate oscillator arm and the oscillator arm (front). Next, turn crankshaft to place the lay on back center and then adjust the knock-off stand to approximately level position, and the proper height to make sure that the lay clears the parts mounted on the knock-off stand. Next, tighten the oscillator arm (front) to the oscillator arm shaft, and then tighten the knock-off to a point where the pin in knock-off will be in center position of the slot in which it rotates.

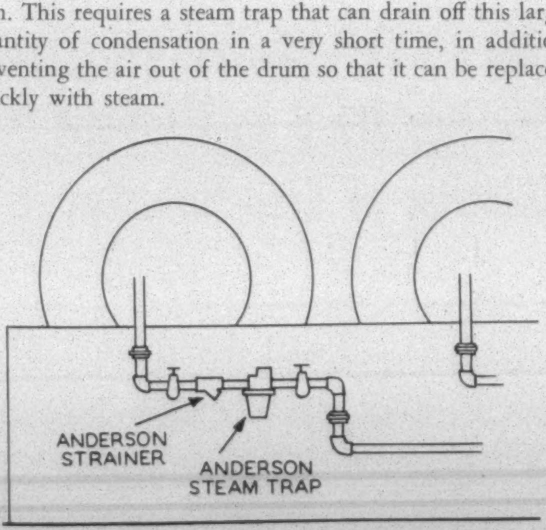
Disconnect the shipper handle from the shipper mechanism and pull the handle in running position, then adjust the knock-off rod to place the knock-off in position where it will release the shipper handle when the knock-off bunter makes contact with the knock-off. Next, turn the crank arm to place the lay on bottom center, and then turn the crankshaft slowly back towards back center, placing the knock and the knock-off bunter in contact, and then turn crankshaft to place lay on back center and adjust the knock-off bunter to where there will be about one quarter of an inch play between the knock-off and the knock-off bunter. Next, time the oscillator cam and tighten it securely to the cam shaft. Proper timing of the oscillator cam is vitally important, because if the cam is not timed to coincide with the action of the lay and the knock-off, the loom will not be stopped off when a warp thread is broken, and in this event the continued pressure on the down drop wire would cause it to become crushed or split.

If the weave room supervisor at mills where this stop motion is used will have all of the harnesses and drop wires (patterns) checked when they are taken from the loom, he will most likely find a lot of damaged drop wires, which of course can be the source of a lot of imperfect cloth. And by doing this he will realize the importance of seeing to it that the stop motions are checked regularly and kept in good working order.

Some Tricks of the Trade in Slashing

Steam Trap Prevents Damage To Warp, Speeds Production

THE Elmore Corp., Spindale, N. C., uses the following method of trapping slashers to prevent damage to the warp and to speed up production. Slashers on rayon, nylon and other filament yarns operate at low temperatures to prevent damage to the warp. A slasher frequently is stopped to repair ends (single strand of yarn). Then it is necessary to cut off the supply of steam and vent off remaining steam in the drums to hold the temperature down. Because of this low temperature condition, during the periods of shutdowns, condensation forms in large quantities quickly. When the slasher is started back up the drums should come up to temperature quickly so that there is no lost production. This requires a steam trap that can drain off this large quantity of condensation in a very short time, in addition to venting the air out of the drum so that it can be replaced quickly with steam.



Slasher hook-up at Elmore Corp., Spindale, N. C.

To do this job, Elmore replaced conventional inverted bucket traps with seven new combination Series B Heat-Kwik steam traps. These traps, unlike the single orifice traps, combine a thermostatic design with an inverted bucket and have two orifices for purging air and draining condensate. The thermostatic element handles large quantities of cold water on start-up and in addition vents large quantities of air.

This function is automatically controlled by the temperature differential between air and steam. During periods of start-up, all the air is drained out of the Elmore slashers in a matter of seconds so that production can be started almost instantly. Series B Heat-Kwik combination traps are manufactured by The V. D. Anderson Co., Cleveland 2, Ohio.

Two Methods of Controlling Solution Level in Size Boxes

IN the application of sizing it is necessary to maintain a constant solution level in the size box in order for every yard to be uniformly saturated. Controlling the level within satisfactory limits is complicated by turbulence and foaming of the solution while the size box is operating.

The Brown electric-pneumatic size level control system is automatic and uses the electrical conductivity of the size solution itself as the actuating medium. This system requires only a few inexpensive components. Electric current, a supply of control air, two stainless steel electrodes, two relays and a diaphragm control valve will do the job fine.

How It Operates

The two-electrode method of installing the control sys-

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tem is demonstrated in Fig. 1. The electrodes are mounted over the edge of the size box so that one is one-fourth to one-half-inch below the other. If only one electrode was installed, the constant agitation and foaming would cause the electrode to be continuously in and out of the solution. Consequently, the various components of the control system would never be at rest. By mounting two electrodes, one below the other, the effect of the wavelets and ripples on the surface of the solution is eliminated.

When solution in the size box falls below the lower electrode, it causes the R182B relay to close the circuit to the RO400A electric-pneumatic relay. The RO400A relay changes the control air pressure on the diaphragm control valve in the size solution feed line, opening the valve and allowing the solution to flow until level in the size box reaches the upper electrode. When this happens, the reverse operation occurs, and the valve in the solution feed line closes.

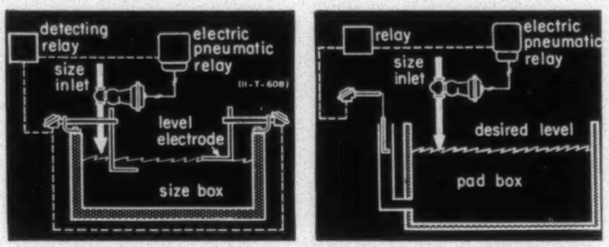


Fig. 1 *(left)*—**Surface agitation doesn't affect this efficient automatic size box level control system. Fig. 2** *(right)*—**The standpipe method, used at Dan River, requires only one electrode.**

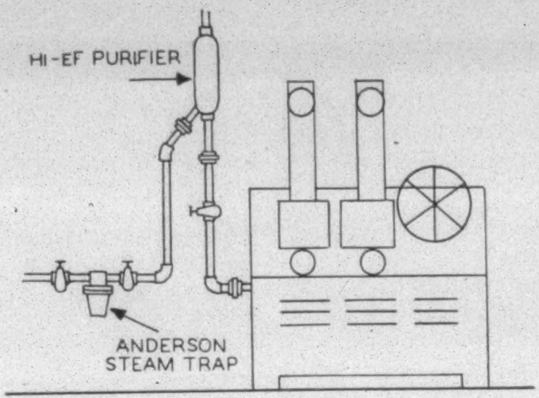
The Standpipe Method

Another way of licking the problem is to mount the electrode (two electrodes aren't necessary for this method) in a standpipe as illustrated in Fig. 2. James N. Lovelace, an instrument technician at Dan River Mills, Dan River, Va., states that the standpipe method is used at Dan River. The standpipe, of course, is free of the turbulence and flow of the solution in the size box. Except that the standpipe method requires one instead of two electrodes, the level control system consists of the same components and functions exactly as described fo rthe first type of installation.

Purifier Used to Prevent Dilution of Size Solution

ONE problem frequently encountered is that of maintaining an absolutely dry supply of steam to size boxes. These boxes are often remotely located from the boiler room so that they receive a very wet supply of steam. Excess condensate in the steam dilutes the starch solution which in turn results in a weak yarn which cannot stand the strain of weaving.

To solve this difficulty a large Alabama mill has installed Hi-eF purifiers in each steam supply line to the size box. These devices remove all the moisture and condensate from



Purifiers remove moisture and condensate from steam line leading to size box.

the steam before it is fed into the size box, preventing the dilution of the sizing solution. The purifiers are easily installed in a pipeline like a pipe fitting. They have no moving parts or filters but remove the condensate by employing centrifugal force through a series of vanes and baffles. The condensatae is ejected through a drain and dripped through a Super-Silvertop steam trap.

In most cases the power engineer at the Alabama mill installs the purifier ahead of the pressure reducing valve at the size box as this also protects the valve against any foreign matter and gives a good drip trap just ahead of the valve. Hi-eF purifiers are also a product of The V. D. Anderson Co.

Du Pont's Latest Wash-Wear Promotion

Men's lightweight suits, soiled from many days of wear, went through the full cycle of an automatic washer, were dried in a home tumble dryer and emerged wrinkle-free, with original creases, and ready for wear—with no pressing—in a demonstration at New York City last month. Fabrics containing a high percentage of Du Pont man-made fibers, carefully controlled special garment construction, plus advances in home laundry equipment, were credited with making it possible to quickly revitalize men's suits in this way.

New machine-dryable, wash and wear suits can be ready for wear within an hour—the operating time of the full cycle of automatic washers, plus the drying period of the modern tumble dryer. These suits, which take full advantage of the automatic home laundry, will be available to the public next Spring.

Suits washed and dried to demonstrate the new convenience were made of fabrics containing 65 per cent Dacron intimately blended with 25 per cent rayon and ten per cent mohair. Orlon acrylic fiber, which has similar properties, can also be used when it constitutes 70 to 75 per cent of the fabric. Nylon, rayon, acetate, cotton, mohair and flax may be used in intimate blends with Dacron or Orlon as the balance of the fabric.

Haspel Bros. Inc., New Orleans manufacturer of men's lightweight suits, will make the first machine-dryable suits to be offered the public. Du Pont textile fibers department technical specialists worked closely with Haspel in the development.

The first wash and wear suits, also made by Haspel, were introduced in a test sale of 1,200 in 1952.

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★ **EASY TO USE!**
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Here is an easy-to-use, economical desizing agent which is absolutely safe on all fabrics . . . a quick and complete starch digester . . . always dependable.

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Resin Finishing Again Receives Emphasis At National Cotton Council Conference

By WILLIAM M. SEGALL, Technical Department, National Cotton Council of America

PAPERS on the resin finishing of cotton again highlighted the meeting of the National Cotton Council's fifth Chemical Finishing Conference, which was held on Oct. 3 and 4 at the Statler Hotel in Washington, D. C.

Two full sessions, covering the morning and afternoon of the second day, were devoted to the application of resins to cotton. Papers by Dr. T. F. Cooke of American Cyanamid Co., Scott H. Foster of Monsanto Chemical Co. and Dr. L. Q. Green of Du Pont dealt with the theoretical aspects of this most important subject.

Dr. Cooke reported on an extensive study which was undertaken by American Cyanamid to evaluate the influence of various factors in the resin treating of cotton on the end properties of the fabric. The following variables were studied to determine their effect on wrinkle recovery, tensile and tear strength, and discoloration before and after washing: (1) *Type of resin*—urea; melamine; ethylene urea; modified melamine. (2) *Accelerator* (catalyst)—ammonium; alkanol amine; metallic inorganic salt. (3) *Concentration of resin.* (4) *Curing temperature.* (5) *Curing time.*

The experiments were designed and analysed on a firm statistical basis so that accurate conclusions could be drawn with a minimum of experimentation. Nevertheless, over 1,200 yards of fabric, which had been drawn from a larger lot of over two miles, was required in the process of the work.

It is expected that the use of these data will enable cotton fabric finishers to select the proper resin system for use in obtaining optimum properties for any desired end use.

Some of the conclusions reached by Dr. Cooke and his co-workers were that: (1) the ethylene urea finishes generally have the highest wrinkle resistance; (2) ethylene urea resin is the fastest curing; (3) melamine resins have the greatest durability to chlorine washing; and (4) the ethylene urea resins show the greatest initial yellowing during curing.

Dr. Cooke cautioned that, although these are general conclusions, the data must be carefully studied in order to determine the best materials and conditions to use for optimum results on any individual fabric.

Mr. Foster's paper dealt with the specific problem of the relationship between the concentration of resin or catalyst on the fabric and properties such as wrinkle recovery, tear and tensile strength.

It was found that a definite relationship exists. With constant resin solids, the wrinkle recovery increases as the logarithm of the catalyst concentration, over a limited range. The wrinkle recovery also varies directly as the logarithm

Dr. L. Q. Green, Du Pont; S. H. Foster, Monsanto; Dr. T. F. Cooke, American Cyanamid; C. W. Shroeder, Shell Development.

Many washings old and still wrinkle resistant thanks to RHONITE R-1

Washdays have come and gone, yet this dress sheds wrinkles as easily as ever. But that's how cottons behave when treated with RHONITE R-1 finishes. RHONITE R-1, a modified urea formaldehyde resin, is a monomeric product of such small molecular size that it penetrates and reacts inside the fibers. That's why this dress still needs only a touch of the iron to look its best.

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of the resin solids on the fabric, up to a point beyond which further addition of resin produces no change.

Another important conclusion by Mr. Foster is that the nitrogenous resins produce crease resistance by cross linking between adjacent cellulose molecules. This latter conclusion was also arrived at and presented by Dr. Green, who, with his co-workers, has made an intensive study of the action of dimethylol ethylene urea resin on cotton fabric. Examination of treated fibers by staining techniques and by comparison of mono- and difunctional compounds led to several interesting conclusions on the location and mechanism of reaction of creaseproofing compounds.

New Creaseproofing Agent

The story of a new product in the cotton creaseproofing field was presented by Carl W. Schroeder of Shell Development Co. There are a number of shortcomings inherent in the use of nitrogenous resins to produce wrinkle recovery in cotton fabrics, and work by Mr. Schroeder's company has resulted in the production of a resin which appears to have overcome some of these difficulties. These epoxy resins, which are of an entirely different chemical nature than the presently used aminoplast type, contain no nitrogen and no formaldehyde, thus overcoming the problems of chlorine retention and odor formation.

The use of these epoxy resins should make possible, for the first time, the production of wrinkle resistant white fabrics which can be laundered with chlorine and pressed without danger of yellowing or strength loss. The process for epoxy resin application to fabric is essentially the same as for other resins, consisting of padding, drying and curing. The catalysts which must be used are somewhat different, epoxy resins requiring stronger compounds such as fluborates, sulfates and perchlorates. Zinc fluoborate has been found quite successful as a catalyst and its use is recommended.

Mr. Schroeder also presented a comparison of the properties of epoxy resin with other cotton creaseproofing agents. In general, it appears that epoxy resin ranks somewhat below urea and melamine resin in wrinkle resistance and below melamine in strength retention, but is superior in dimensional stability, durability to laundering and resistance to acid hydrolysis and chlorine bleaching.

Problem and Possible Answer

An interesting problem, and a suggestion for its solution, were presented at the Thursday afternoon session. The speakers, Dr. M. D. Hurwitz of Rohm & Haas, Robert T. Graham of National Institute of Drycleaning and Dr. J. D. Reid of the Southern Regional Research Laboratory of the U.S.D.A., discussed a new concept in the resin finishing of cotton which is aimed at overcoming one of the difficulties presently encountered in the utilization of resin-finished goods. Hundreds of millions of yards of cotton fabric are treated each year to produce wrinkle recovery, and in many uses these fabrics give excellent performance. In certain instances however, the high degree of wrinkle resistance results in less than satisfactory appearance by making it difficult or impossible to press seams flat or to produce a sharp crease in trousers.

The suggested solution presented by the three speakers is the possibility of treatment in the form of garments, by drycleaners or garment manufacturers. It was found that a combination of ethylene urea resin, catalyst, thermoplastic acrylate resin, silicone, and a softener could be applied by immersing the garment in a treating bath, extracting, and curing by ironing with a hot head press and/or a hand iron at a temperature of 250-300°F.

There are certain difficulties inherent in the process. The best results, from the standpoint of wrinkle resistance, are produced by ironing wet. This produces an evolution of formaldehyde, which is at the least objectionable. In addition, the pressing must be done with more than ordinary care, since a wrinkle pressed into the fabric is set by the resin and is almost impossible to remove.

The speakers admitted that the work was in only the preliminary stages but they seemed confident that further research would overcome these difficulties and that a practical process would be worked out.

Weather Resistance

Two of the speakers in the Wednesday morning session dealt with an important property of cotton textiles—weather resistance. W. Norbert Berard discussed the results of work done at the Southern Regional Research Laboratory under a fellowship established by the National Canvas Good Manufacturers Association. The study covered the three separate factors which determine the serviceability of cotton duck in awnings: (1) treatment of the base fabric; (2) coating applied to the treated fabric; and (3) sewing threads used in fabrication. It was found that a combination of urea formaldehyde and copper-8-quinolinolate produced an excellent treatment for base fabric, providing considerably greater durability to weathering than the usual commercial treatments. The use of alkyd resin formulations for coating provided better protection than conventional coatings of natural drying oils, and in addition required a much shorter drying time. Acetylated vat-dyed sewing thread had a strength retention more than twice as high as untreated thread. This research, pointing the way for improvement in all three factors, should be the basis for greatly improved durability to weather.

Dr. G. M. Gantz of General Aniline & Film Corp., presented a paper on the subject of ultraviolet light absorbers.

W. N. Henderson, Allied Chemical; Dr. V. D. Reid, S.R.R.L.

Dr. Jack Compton, I.T.T.; Dr. G. M. Gantz, Antara Chemicals; W. N. Berard, S.R.R.L.

Heretofore, there have been two methods of attack in the attempt to prevent light degradation of cotton textiles: (1) the use of pigments to prevent the access of light to the fabric; and (2) the use of antioxidants to inhibit oxidation, which is one of the mechanisms in light degradation. Only recently has the possibility been proposed of selectively absorbing the ultraviolet light, by means of certain substances which have this property. Dr. Gantz presented data on a number of compounds of the benzophenone type and described their use in various non-textile applications. He proposed their use for the protection of textiles from light damage, and for improving the light fastness of dyes, but pointed out that there are certain problems to be faced in textile applications. Water soluble absorbers would be unsatisfactory due to lack of wash fastness and the possibility of bleaching out in weathering. On the other hand, it would be difficult to insure adequate penetration into the fiber of an insoluble type. It seems certain however that these problems will be overcome and that ultraviolet absorbers will find a place in the treatment of textiles.

A subject which has aroused much interest and speculation in the textile industry is the cyanoethylation of cotton. This process which was developed at the Institute of Textile Technology, has been described at previous meetings of the Chemical Finishing Conference. The development has progressed to the pilot plant stage and more than 19,000 pounds of cotton yarn and 18,000 yards of cotton fabric were treated in pilot plants at Rossville, Ga., and Texas City, Texas. Some preliminary results of end-use performance tests on this material were presented by Dr. Jack Compton of I.T.T. at the Wednesday morning session.

The fabric and yarn have shown good resistance to weather, rot, heat, abrasion and chemicals and it appears that there will be a market for Azoton, which is the name given to cyanoethylated cotton, in a number of end uses, among which are fish nets, buffing wheels, acid filters and shade cloth. Final results of the service evaluation tests will provide more detailed information.

Within recent years there has been increased consumer acceptance of coated fabrics and unsupported films in such uses as upholstery and clothing. The drawback to these materials, however, has been their lack of vapor permeability, or "breathing" as it is so often termed. This inability to transmit water vapor tends to make them hot and uncomfortable.

The paper, by Dr. Lyman Fourt of Harris Research Laboratories, described research on the development of a coated cotton fabric which would "breathe." There are a number of patents for various coated fabric structures, utilizing spaced holes in the coating, microporous coatings, or fillers, but it was felt that an additional possibility lay in the ability of the cotton fiber itself to transmit water vapor,

Methods of coating, utilizing fabrics with pronounced ridges such as poplins and twills, where the coating can be driven into the "valleys," leaving the "hills" exposed, were tried. These produced satisfactory vapor permeability, while retaining their water resistance. There are still a number of factors to be considered in the production of commercially acceptable fabrics by this method, but the preliminary results appear promising.

Chemical Modification

Two of the speakers on Wednesday afternoon's program presented the results of advanced research on important chemical modifications of cotton. Wilson A. Reeves of the Southern Regional Research Laboratory of the U.S.D.A. described recent work in the development of a flameproofing treatment for cotton. Prior work by S.R.R.L. has resulted in the development of the THPC, BAP and PNE treatments, each of which provides excellent flame resistance within certain limitations.

In order for a flame resistant treatment to be considered completely satisfactory it must be inexpensive, provide resistance to all types of ignition, be durable to alkaline laundering, not affect hand, tear or tensile strength, be stable, and be resistant to chlorine bleaches.

The latest development by Mr. Reeves and his co-workers

Wilson A. Reeves, S.R.R.L.; Lyman E. Fourt, Harris Research; E. M. Buras, S.R.R.L.

seems to fulfill all of the requirements but one. These APO- and APS-THPC resins are made by reacting tris (1-aziridinyl) phosphine oxide (APO) or tris (1-aziridinyl) phosphine sulfide (APS) with tetrakis hydroxymethyl phosphonium chloride (THPC). All three of the compounds are water soluble and can be applied by padding, drying and curing, as with other resin treatments. Considerably less resin is required than with other durable flame retardants and there is minimum effect on other fabric properties. Unfortunately, the cost of APO and APS is quite high at the present time but it is anticipated that with sufficient demand, the price could be lowered to a reasonable figure.

E. M. Buras of S.R.R.L. presented another significant contribution to present knowledge concerning the chemical modification of cotton. A logical extension of the work on partially acetylated cotton, which is now commercially available, is the investigation of fully acetylated cotton, or simply FA cotton. Methods for complete substitution of the cellulose molecule with acetyl groups, without destruction of the fibrous nature, were already known, but some modification was necessary in order to treat raw stock, yarn and fabric in sufficiently large lots for evaluation tests.

Examination of the properties of FA cotton disclosed a rather interesting product with the following properties: low moisture regain, decreased fiber tenacity, high heat resistance, increased yarn strength, resistance to weathering, thermoplasticity and excellent rot resistance.

Results are somewhat preliminary and evaluation of the properties is continuing. The data presented show promise of interesting possibilities for this material which is another example of the versatility of cotton when combined with modern chemical technology.

A. A. T. C. C. & the Perkin Centennial

THE 100th anniversary of the discovery of the first synthetic dye by William Henry Perkin was celebrated last month at the Waldorf-Astoria Hotel in New York City in a manner befitting an event of such far reaching significance. Sponsored by the American Association of Textile Chemists & Colorists, along with 27 other participating societies, the Perkin Centennial drew large crowds throughout the week of Sept. 10.

The event got under way with what turned out to be a highly controversial discussion on "Colorfastness of Textiles," with Charles A. Sylvester of the Du Pont Co. presiding and William D. Appel, National Bureau of Standards, serving as moderator. Representatives from this country, preferring the use of carbon arc equipment in testing colors for lightfastness, found themselves at odds with representatives from Great Britain and Europe, who voiced preference for daylight exposure. (Later in the week, on Wednesday, the A.A.T.C.C. gave its committee on lightfastness an additional $1,000 to continue its work on a daylight test for color fading.)

Greenewalt, Mrs. Carothers, C. Paine, Robinson

The Perkin Centennial at The Waldorf-Astoria marked the 100th anniversary of man-made color. Taking part in the luncheon session of International Day were Crawford Greenewalt, president, E. I. du Pont de Nemours & Co., who introduced the principal speaker; Mrs. Carothers, widow of Dr. Wallace H. Carothers, who was honored posthumously at the meeting for his research leading to the discovery of nylon; Clifford Paine, president of the British Society of Dyers and Colourists; and Sir Robert Robinson, Nobel Prize winner for chemistry, professor emeritus, Oxford University and a director of the Shell Chemical Co. Ltd., who was principal speaker of International Day. International Day was sponsored by the American Standards Association and the International Organization for Standardization.

With this international flavor, the centennial proceeded throughout the week, culminating, some observers pointed out, in a closer understanding between the segments of the dyestuff industry in this country with those abroad. The principal speaker at the luncheon on opening day, tagged "International Day" by its co-sponsors, the A.A.T.C.C. and the American Society for Testing Materials, was Sir Robert Robinson, Nobel Prize winner for chemistry, professor emeritus of Oxford University and a director of the Shell Chemical Co. Ltd. Representing the Society of Dyers and Colourists, Sir Robert presented an address entitled, "Sir William Perkin—His Life and Work." Tracing Perkin's career, Sir Robert pointed out that Perkin became interested in chemical experiments at the age of 12 and entered the Royal College of Chemistry when he was 14. His tutor at the school was the renowned German chemist Hofmann. Perkin so impressed Hofmann that he made him an honorary assistant in the research laboratory within a few years.

During this association, Perkin, wanting to conduct some research projects of his own, converted a room in his home to a laboratory where he could work evenings and during vacations. One of his personal projects was to develop a method for the synthesis of quinine. It was while working on this project that he made his remarkable discovery. Instead of the clear crystaline mass he was seeking, his experiment turned out a black precipitate. Further work

Young, Jacoby, G. Paine, Hamilton, Herrmann

The ribbon is cut to open Perkin Centennial exhibition. Pictured are Henry Young, Interchemical Corp., chairman of the exhibits committee; Raymond W. Jacoby, chairman of the centennial executive committee and president of the A.A.T.C.C.; George P. Paine, the new executive secretary of the A.A.T.C.C.; Robert Hamilton, General Dyestuff Corp., chairman of the centennial printing committee and a member of the exhibits committee; and Henry F. Herrmann, Vat Dye Institute, treasurer of the Perkin Centennial.

Cunliffe, Buxtorf, Jacoby, Sylvester
Appel, Niederhauser, Rabe, Staples

Speakers on colorfastness at the opening session of International Day during the Perkin Centennial. Pictured are William D. Appel, National Bureau of Standards; J. P. Niederhauser, Campaigne Francaise des Matieres Colorantes; Paul Rabe, Farbenfabriken Bayer, A. G.; M. L. Staples, Ontario Research Foundation; P. W. Cunliffe, British Cotton & Wool Dyers Association; Fritz Buxtorf, Sandoz Ltd.; Raymond W. Jacoby, president of the A.A.T.C.C.; and Charles A. Sylvester of Du Pont Co.

upon this substance resulted in the isolation of a purple color which became the first dye ever produced from coal tar.

He sent samples of his dye to a firm which expressed great interest in its possibilities, and so encouraged Perkin to produce it for commercial use. Along with his father and brother, Perkin opened a small factory in June 1857. Six months later, after learning that the discovery of the dye was much simpler than its actual production, Perkin turned out his first lot of dye. It was no easy matter to develop a market for his dyes, but Perkin did, in both the silk and cotton fields, as well as on wool and wool and cotton blends.

He continued improving his product and conducting further experiments until he retired from active participation in the industry in 1874 to devote his time exclusively to research. He died July 14, 1907, only a year after the 50th anniversary of his momentous discovery.

"Half a century ago," Sir Robert pointed out, "Perkin was most worthily honored (on the occasion of the 50th anniversary) and our records show how deeply felt was his appreciation of the tributes paid to him personally. Now after another 50 years our estimate of his greatness is undiminished and we are in a still better position to realize how great is the debt of gratitude we owe to a man who was one of the great pioneers of the chemical industry, a man who travelled straight toward the light that broke on the horizon."

Technical Papers

The first three days of the meeting were devoted to a number of technical papers on the use of colorants in a variety of industries—plastics, drugs, leather, food and paper—plus discussions citing color in national defense, the impact of synthetic dyes on the economy, the history of color, the psychology of color and others. The final three days of the event were highlighted by several of the features presented annually at the national convention of the A.A.T.C.C. This year's convention for the association ran concurrent with the centennial, from Thursday, Sept. 13 through Saturday, Sept. 15.

Olney Medal Award

Foremost among these A.A.T.C.C. activities was the Olney Medal Award Luncheon held Thursday noon. This year's award went to Dr. Walter J. Hamburger, director and treasurer of Fabric Research Laboratories, Dedham, Mass. In presenting the award, Raymond W. Jacoby, A.A.T.C.C. president and chairman of the executive committee of the Perkin Centennial, cited the fact that the textile industry has changed to such an extent in the past few years that there is no longer a sharp cleavage between textile technology and textile chemistry. Describing Dr. Hamburger as "the complete embodiment of this new field of thought and endeavor," he said, "You received your bachelor's degree in mechanical engineering, your doctor's degree in chemistry. As you served, you constantly governed every thought and action by a consideration of all the factors involved. As a result, you made many valuable contributions to our progress. What is more important, however, is that in scanning the broad horizon which your vision revealed, you have been a shining example and showed the way to countless others who, by following in your footsteps, will undoubtedly, in the years which lie ahead, contribute much more to our progress."

In receiving the award, Dr. Hamburger told the luncheon meeting that an entirely new type of textile science is on the way as a result of increasing machine speeds and the probable application of aero-dynamics, fluid mechanics and electrostatics to fiber handling. He expressed the opinion that the industry soon will be called upon to produce materials of fibers, yarns and fabrics combined in unorthodox forms. To accomplish this, he said, principles of other sciences will have to be drawn upon.

"The requirements which are now and which will in the future be demanded of producing equipment introduce an entirely new branch of textile science, namely, that which deals with the reaction of textile materials with processing equipment elements at ever increasing operating speeds. This phase of textile research, sometimes referred to as 'dynamics of machinery,' is engaging the keen interest of imaginative researchers everywhere," Dr. Hamburger pointed out. To meet these demands he urged that the industry advertise its great potential for development to young scientists to induce them to enter the industry.

Walter Hamburger

Edgar C. Britton

Perkin Medal Award

The Perkin Medal Award dinner was held Friday evening, with the 50th medal awarded by the American Section of the Society of Chemical Industry going to Edgar C. Britton of the Dow Chemical Co., Midland, Mich. The award was founded in 1906 and was first presented to Sir William Perkin to commemorate the golden jubilee of his discovery of mauve. Earlier, on opening day, the Perkin Medal for The Society of Dyers and Colourists was awarded posthumously to Dr. Wallace H. Carothers, discoverer of nylon. Clifford Paine, president of the S.D.C., presented the medal to the widow of Dr. Carothers.

A.A.T.C.C. Research Contest

The annual A.A.T.C.C. intersectional research contest was held Saturday morning, Sept. 15, with the Piedmont Section taking first place with a paper on "Effect of Resin Finishing on Lightfastness of Vat Dyes." Second place went to the Washington Section for a paper on "A Study of the Scorching Characteristics of Fabrics." The Rhode Island Section won third place with a paper on "Roller Printing of Wool Fabrics with Fast Colors."

Other A.A.T.C.C. sections taking part in the contest included the New York Section, "The Application of Electrical Instruments for Measuring Moisture Content"; the Pacific Southwest Section, "A Report on the Effect of Smog on Textile Materials in Los Angeles"; the Philadelphia Section, "Cationic Softeners and Their Effects on Woven Fabrics"; and the South Central Section, "The Effect Upon Shade Matching of Carpeting from the Use of Different Latex Formulations with Selected Dyestuff Classifications."

The results of the contest were announced at the annual A.A.T.C.C. banquet which closed out the week-long activities Saturday night. At the banquet, a painting of Sir William H. Perkin was presented to the A.A.T.C.C. by the Imperial Chemical Industries Ltd. The portrait will hang in A.A.T.C.C. headquarters in Lowell, Mass.

Exhibits

In addition to the technical papers presented at the meeting, there were exhibits of an educational nature shown Tuesday through Saturday. One exhibit entitled "A More Colorful World," sponsored by the manufacturers of organic colors, demonstrated the properties of modern dyes and their uses in industry, fashion and the home. Contributors included Alliance Color & Chemical Corp., Althouse Chemical Co. Inc., American Aniline Products Inc., American Cyanamid Co., Ansbacher-Siegle Corp., Arnold Hoffman & Co. Inc., Berkshire Color & Chemical Co., Blackman-Uhler Co., Carbic-Moss Corp., Chemical Mfg. Co. Inc., Ciba Co. Inc., Dye Specialties Inc., E. I. du Pont de Nemours & Co. Inc., Geigy Dyestuffs, General Dyestuff Co., Hilton-Davis Chemical Co., Imperial Paper & Color Corp., Industrial Dyestuff Co., Interchemical Corp., H. Kohnstamm & Co. Inc., L. & R. Organic Products Inc., Manufacturing Chemists Association, Metro Dyestuff Corp., National Aniline Division, Nyanza Color & Chemical Co. Inc., Pfister Chemical Works Inc., Pharma Chemical Corp., Progressive Color & Chemical Co. Inc., Sandoz Chemical Works Inc., Sherwin-Williams Co., Southern Dyestuff Corp., Synthetic Organic Chemical Manufacturers Association of the U. S., United Aniline Co., Young Aniline Works Inc. and Zinsser & Co. Inc.

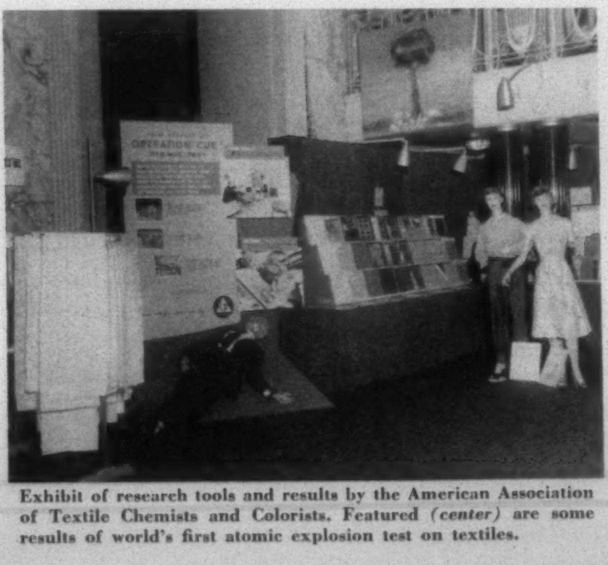


Exhibit of research tools and results by the American Association of Textile Chemists and Colorists. Featured *(center)* are some results of world's first atomic explosion test on textiles.

"A More Colorful World" was the theme of the exhibition held in conjunction with the Perkin Centennial celebration.

Kaswell, Edelstein, Caley

Participants in the "History of Color" session Sept. 12 were Ernest R. Kaswell of Fabric Research Laboratories; Sidney M. Edelstein, Dexter Chemical Corp.; and Earle R. Caley, Ohio State University.

In the Jade Room of the Waldorf, manufacturers of fibers and fabrics displayed the whole range of present-day colors and fabrics, while in the Basildon Room companion exhibits displayed the variety of finishes that are available to improve the serviceability and increase the value of fabrics, both natural and synthetic. These exhibitors included American Enka Corp., American Viscose Corp., Celanese Corp. of America, The Chemstrand Corp., The Color Association of the U. S. Inc., Courtaulds (Alabama) Inc., Cranston Print Works, The Dobeckmun Co., E. I. du Pont de Nemours & Co. Inc., Eastman Chemical Products Inc., National Aniline, Union Carbide & Carbon Corp., Gaston County Dyeing Machine Co., General Electric Co., B. F. Goodrich Chemical Co., Goodyear Tire & Rubber Co. Inc., International Salt Co., Metro-Atlantic Inc., Morton Salt Co., National Starch Products Inc., Onyx Oil & Chemical Co., Rohm & Haas Co., Standard Chemical Products Inc., Wallerstein Co. Inc. and Warwick Chemical Co.

New Nylon Dyeing Process

The Chemstrand Corp., one of the exhibitors at the centennial, had on display what it termed "a pace setting improvement in filament nylon dyeing." According to Walter H. Hindle, associate director in charge of textile research for Chemstrand, the new process provides a previously unmatched combination of dyeing uniformity and colorfastness worthy of the long-lasting qualities of filament nylon yarn.

"For the first time in its history," Mr. Hindle said, "nylon can be successfully dyed in fast color for end products. Even when washed at temperatures of 160°F. and higher, Chemstrand filament nylon dyed by the new technique has shown excellent resistance to color loss. Improvements in lightfastness are also very substantial."

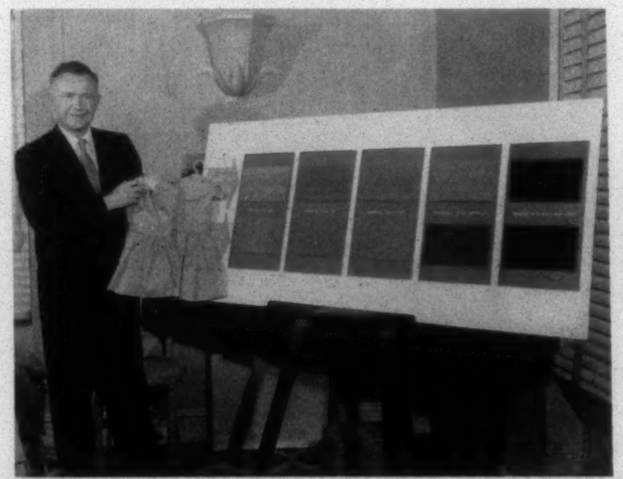
Named the Chemnyle process, the new nylon dyeing method was developed in Chemstrand's research division at Decatur, Ala. Mr. Hindle said the new method uses dye assistants to modify the application of existing acid and direct dyestuffs. He termed it adaptable to all forms of existing dyeing equipment. With the process, it was pointed out, the same excellent uniformity of dyeing has been obtained on Chemstrand nylon as is normally encountered with dispersed acetate dyestuffs but with the high fastness properties of acid and direct dyestuffs, particularly when aftertreated.

Mr. Hindle pointed out that up until now filament nylon had been largely dyed with disperse dyestuffs in order to obtain uniformity of dyeing but that this had been done at the expense of good colorfastness. On the other hand, he continued, many acid and direct dyestuffs had given good colorfastness at the expense of uniformity of dyeing. "The net result," he pointed out, "was that for many years filament nylon fabrics, sweaters and hosiery which appeared on the market possessed a colorfastness which did not measure up to the longevity of the nylon yarn."

Commercially dyed fabrics and test results on fabrics dyed by the Chemnyle process were exhibited at the company's booth in the Waldorf. The Chemnyle dyed goods showed excellent resistance to 160° to 212° washing while conventionally dyed goods showed a very substantial loss of color. Tests of lightfastness similarly showed a substantial improvement. Also shown were samples of nylon fabrics containing a wide range of deliberately induced non-uniformities from both a physical and chemical standpoint. These showed that while a conventional acid or direct color dyeing process exaggerated these conditions, the same dyestuffs applied by the Chemnyle process gave excellent uniformity.

In an area beside the entrance to the Grand Ballroom at the Waldorf, a special exhibit featuring colorfastness, testing equipment and methods developed for the benefit of the consumer and the industry was sponsored by the A.A.T.C.C.

One of the best attended functions at the centennial was a special entertainment feature presented on Thursday afternoon. Called "Cavalcade of Color," it was a fast moving song and dance review produced with professional stage talent by Good Housekeeping and the National Retail Dry Goods Association. The purpose of the review was to dramatize the evolution of dyes in the history of costume.



Results of the Chemstrand Corp.'s new Chemnyle process for filament nylon dyeing are displayed by Walter H. Hindle, Chemstrand textile research department associate director, at a press conference announcing the new process. On the display board are nylon fabrics with intentionally induced chemical and physical non-uniformities. The top row was dyed by conventional processes which exaggerated the non-uniformities while the same material (shown in bottom row) had excellent uniformity with the "Chemnyle" process. Mr. Hindle also displays made-up goods dyed by the new method which gives both excellent uniformity and high colorfastness even when washed at temperatures of 160 to 212° F.

Chatham Mothproofs Apparel Fabrics

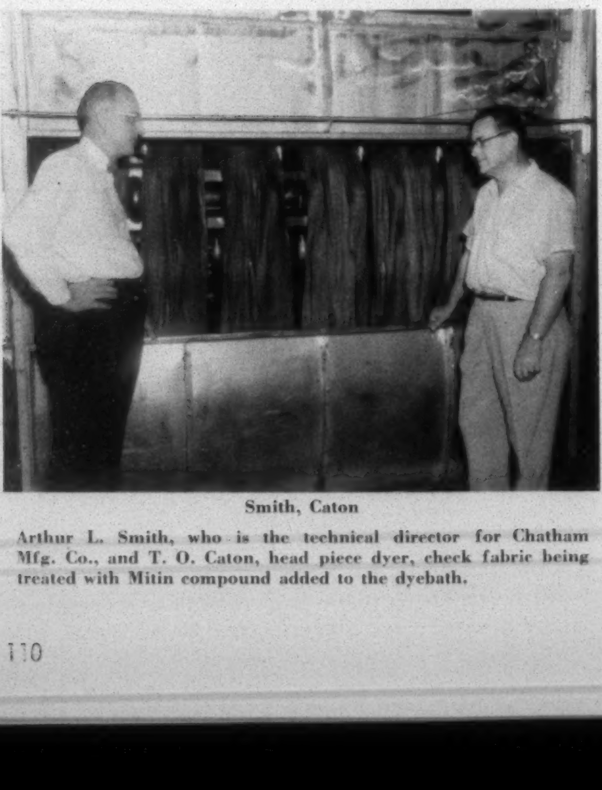
By JAMES McADEN JR., Editor

For the quality apparel trade this well-known Southern woolen mill offers fabrics which insects do not like, using the Swiss-developed compound, Mitin.

THIS is the story of how Chatham Mfg. Co. uses Mitin (pronounced "mitten"), Geigy's patented and name-registered mothproofing agent, on woolen fabrics. It isn't a complicated story, actually, because when you talk to Chatham officials and executives at Elkin, N. C., you find that there is no problem-solution angle for putting it down on paper. The big woolen mill simply purchases the Geigy compound, puts it in dyebaths running goods which call for mothproofed labels, and lets the chemical company do all testing. The significant point, as far as Chatham is concerned, is that there have been no complaints from customers. Mitin apparently does the job, so well enough is being let alone.

Mitin has a pedigree—di-chloro-diphenyl ether di-chlorophenyl urea. Its trade name is derived from the French word for moth, *la mite*. The compound is just a few years old, having been developed by the same Swiss scientists who originated DDT insecticides. It is sold in the United States by Geigy Dyestuffs Division of Geigy Chemical Corp.

Chatham started using Mitin in 1954, after Arthur L. Smith, the mill's technical director, had read about it in technical literature and following several consultations with Howard E. Sprock, manager of the Geigy branch at Charlotte, N. C. Since then, Chatham has used considerable quantities of Mitin to treat its line of fabrics which are sold to garment cutters. Chatham was one of the first mills to actually include the expression "Mothproofed with Mitin" in its identification labels supplied with the fabrics; most mills supply hang-tags to garment-making customers. A few years ago Chatham was almost altogether a blanket and industrial woolen fabric concern. Now it has an extensive line of apparel fabrics.



Smith, Caton

Arthur L. Smith, who is the technical director for Chatham Mfg. Co., and T. O. Caton, head piece dyer, check fabric being treated with Mitin compound added to the dyebath.

For Chatham's apparel fabrics Mitin is added direct to the piecegoods acid dyebath, where the colorless compound behaves like a dye.

Mitin is not used generally on Chatham's line of blankets. For one thing, Chatham now offers many blankets made from all-synthetic or blended fiber yarns.

One Chatham blanket, the all-wool "Elegance" number, is Mitin-treated. Retailing for $50, it probably could be put into the same ego-appealing category as Countess Mara neckties, Continental automobiles, and so on. Quite obviously the application cost of five to six cents per pound hasn't forced Chatham to raise the price of its "Elegance" blanket. The treatment is just one more feature put into an item of topmost quality. On the understandably limited quantity of "Elegance" blankets manufactured by Chatham, Mitin is added to the raw stock dyebath.

The Nature of Mitin

Mitin is a chlorinated aromatic sulfonic acid derivative, usually applied at the rate of two to 2½ per cent by dry weight of the fabric being treated; thus, 100 pounds of cloth would have two pounds of the mothproofer added to boiling water then poured into the dye vat. In the process, Mitin is chemically bonded to the fiber in the same manner as a dyestuff.

Once treated, the material is considered to be durably mothproofed, and the application never has to be renewed. The mothproofing remains fully effective throughout numerous dry cleanings and washings for the usable life of the garment.

The larvae of clothes moths which have hatched on, or been somehow transferred to woolens, nibble on the Mitin-treated fibers and are almost instantly killed, no matter how microscopic the bit they eat. Young larvae of carpet beetles are similarly exterminated. Older beetles find Mitin mothproofed material so repellent that they either die of starvation or go elsewhere.

In developing Mitin, Geigy research chemists synthesized more than 88,000 compounds in ten years. Mitin didn't come about by accident, as did some wonder drugs. Geigy researchers had a definite goal in mind when they began their search.

Although Mitin was developed by Geigy and introduced in Europe on a small scale before World War II, it was not put on the American market until 1947. It was 1950 before the first manufactured garment bore the label which indicated that it was "durably mothproofed," meaning for the usable life of the item. Today scores of mills are using Mitin so that hundreds of manufacturers of apparel for men, women and children, and of carpets and other items can offer consumer goods which are lastingly mothproofed.

Clothes moths and carpet beetles, incidentally, ravage fabrics other than just 100 per cent wool. They eat through fabrics made of wool and synthetics, although they

DURABLY MOTHPROOFED
MITIN
MITIN Durably mothproofed
Not Mothproofed
MOTHS AT WORK!
BOTH BOXES ABOVE WERE INFESTED WITH MOTH LARVAE

This is a motharium such as is displayed by many retail stores throughout the country to illustrate the damage that can be caused by clothes moth larvae. The swatch on the left has been treated with Mitin and infested with scores of larvae, which died shortly thereafter. The other piece was untreated, and larvae virtually consumed the entire swatch in a few weeks.

do not digest the latter. The visual damage done on blends frequently is greater than on pure wool fabrics, because the keratin-eating insects have to devour more material to satisfy their appetites.

Geigy's Testing Service

To protect the reputation of Mitin, Geigy maintains a unique "policing" set-up. Under this system, all mill operators authorized to use Mitin regularly and so label their products send samples of the raw stock, yarn or fabric to Geigy's analytical laboratories. There each sample undergoes a series of tests involving a quantitative analysis inspection which determines the percentage of Mitin in the fabric.

Samples of the same materials are sent to Geigy's entomological laboratory in Bayonne, N. J., where they are tested for efficiency in killing or repelling clothes moths and carpet beetle larvae. Don Ott, Geigy's entomologist, and chairman of the Chemical Specialties Manufacturers Association mothproofing committee, has developed a strain of black carpet beetle which is now the standard for testing mothproofing compounds. He is often referred to as the "moth detective" because he is frequently called up to determine the cause of holes in garments supposedly mothproofed. By microscopic study of fibers and sometimes chemical analysis of excrement, Mr. Ott can tell whether damage was caused by clothes moths or carpet beetles, or by dog or cat scratches, nail tears, acid or fire burns, rat bites or nibbles from some other creature not affected by Mitin. In ten years of testing Mr. Ott has yet to turn up one case of damage caused by clothes moths or carpet beetles to articles properly mothproofed with Mitin.

One of the most fascinating exhibits at Mr. Ott's "motharium" is a shelf of mason jars in which batches of unmothproofed wool have been placed with cultivated beetle and moth larvae. In one jar, a few shreds of cloth are all that remain of five big swatches of filter cloth and wool felt after exposure to moth larvae for only two months. It is obvious, from seeing other jars which have Mitin mothproofed fabrics completely undamaged after months of contact with larvae, that Mitin is a very effective weapon.

Mitin has been found so safe that it can be and is used on blankets for infants; is perfectly safe on children's clothing; and Mitin durably mothproofed carpets are safe for tiny toddlers. Anyone who can wear wool can safely wear fabrics mothproofed with Mitin.

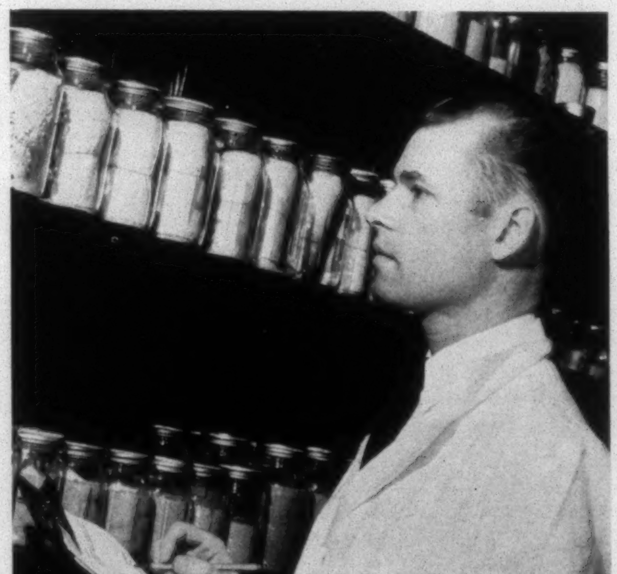
Who Else Uses Mitin?

Since Mitin's introduction in U. S. and Canadian consumer goods in 1950, hundreds of manufacturers have been specifying that fabrics be mothproofed with the compound. Mitin has found particularly quick and wide acceptance by manufacturers of knitted wool garments; is increasingly used in materials for slacks, jackets, skirts, jersey dresses and blouses, cashmere sweaters, wool bathing suits, woolen stoles and scarves, wool headgear and millinery, blankets, knitted yarns, wool felts, upholstery and uniforms.

Mitin has been widely used for years in the British Isles and throughout Europe, particularly in fabrics going into military uniforms. Uniforms worn by members of the Canadian, Netherlands, Swiss, French and Italian forces are Mitin mothproofed. For the past two years, the New York Police Department's procurement branch has been specifying that uniform fabrics "be durably mothproofed with Mitin or a comparable agent." Interestingly enough, the long woolen underwear worn by the famed Royal Canadian Northwest Mounted Police is Mitin mothproofed. This same underwear is widely sold in the U. S. for skiers' use.

Results of a survey of carpet and rug buyers in 116 retail stores in 46 major market areas reveal there is an increasing consumer demand for mothproofing in floor coverings. The survey, conducted for Geigy, showed that over 60 per cent of store buyers consider mothproofing very important to their customers.

A number of American rug weavers have indicated their



Don Ott, Geigy's director of biological research, checks destruction of untreated wool swatches infested with larvae of clothes moths and black carpet beetles. Jars on the right have just been placed on shelf. Ones on extreme left show almost complete destruction by moth larvae after only two months of exposure.

willingness to mothproof carpets durably with Mitin when their customers request it, and several are offering it as an added item of built-in performance. Finishing operations such as decatizing, singeing, tentering, napping and shearing have no influence on the mothproofness of materials processed with Mitin.

The first American-woven carpet line with "durable mothproofing" was introduced this past July by M. J. Whittall of Worcester, Mass., at the New York Furniture Show. Previously, only commercial carpet lines by Whittall and other American weavers had been so treated, although retail rugs from foreign mills have been mothproofed for several years. Whittall's "Finlandia" line was so well received that they announced Oct. 3 their "Criterion" line of three-dimensional wilton broadlooms which are similarly mothproofed with Mitin.

This David Gessner Co. Model NH-33 Hi-Torc napper, one of the newest machinery installations at Chatham Mfg. Co., is used to nap Elegance blanket fabric.

Whiter-than-White Calcofluors Create Emotional Sales Appeal

By HENRY LESESNE

ONE of the most important single merchandising discoveries of the post-war years has been the potential that lies in the emotional response of people to the subtle stimuli of color. And, playing on that chord, the nation's mills have been able to sell more textiles and apparel than ever before in history.

This also explains in large measure the fast-growing prominence of Calcofluor whiter-than-white dyes, marketed by American Cyanamid Co. These products produce clear, clean whites and brilliant pastel shades on fabrics, selling them faster than untreated but otherwise similar textiles.

The growing demand for Calcofluor White-treated fabrics has been willingly accepted by mill men because the process of adding these whiteners is negligible in cost per yard and can readily be applied during normal wet processing steps without special equipment.

Retailers and manufacturers have discovered that when they used fabrics with the magic Calcofluors in them they were a long jump ahead of their competitors who sold goods only ordinarily bleached.

The dyes department of Cyanamid's organic chemicals division is putting on a special drive to bring to the attention of the textile trades the sales benefits of the big chemical company's line of Calcofluor brighteners, and through advertising, direct mail and sales promotion, thousands of textile processors, as well as the trades they service, are being informed how Calcofluor White fluorescent dyes, simply applied by standard methods at a slight cost, can add an overwhelming plus factor in consumer preference.

Traditionally and culturally in the history of mankind, white has always held the number one spot of emotional preference. But not until the "whiter-than-whites" came along was the strength of this emotional appeal fully appreciated and put to the final test of merchandising, where it is now paying handsome dividends. What those Calcofluor brighteners do is to produce a whiter and brighter textile fabric under daylight conditions without appearing "over-blued."

The process may seem complex, but actually the way Calcofluor Whites add whiteness and brightness is simple. We see things in this world because light, whether from the sun or an electric light bulb, is composed of a mixture of colors ranging from blue to red through all the intermediate shades. White is what the eye sees when all the colors that reach us from the sun are mixed in the right proportions.

When any material looks yellowish and dull, it is because that material absorbs rather than reflects blue from the light falling upon it. Therefore, yellow dominates the light reflected to the eye. Not only is the light yellowish but, since blue has been absorbed, less total light is reflected to the eye, and the material seems dull.

When a Calcofluor dye is added to such a material, its appearance changes dramatically. The first thing that happens is that some of the invisible ultra-violet light (present at one end of the spectrum) is changed to visible blue light. This adds back the blue that was previously absorbed, balancing out the colors that are reflected to the eye and restoring whiteness. Additionally, in changing the invisible to visible light, more *total* light is reflected and the material seems more brilliant. Calcofluors restore the *quality* of light and add to the *quantity* of light, creating the effect of extra whiteness and extra brightness.

Just what a whiter whiteness than the average person has ever beheld means in terms of consumer reaction and in

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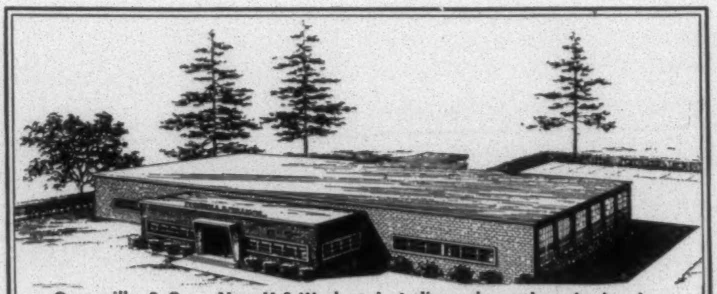

Greenville, S. C.

New M & W plant, including sales and service headquarters, housing both Marshall & Williams Southern Corp. and Marshall & Williams Equipment Co. Designed to speed service, this new 15,000 sq. ft. structure is on S. C. Bypass 291, South Pleasantburg Drive.

If you missed the Southern Textile Exposition, we will be glad to show you — and to discuss in detail — the latest in M & W developments. For years we have concentrated our entire efforts on the manufacture of tentering equipment of all kinds, and the development of auxiliary equipment which is a natural complement of tentering. The entire line includes —

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TENTERETTES
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CONSTANT TENSION WINDERS
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OVERFEED EQUIPMENT
SELVAGE UNCURLERS
TENTER CLIPS
PIN PLATES & CLIPS

M & W

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terms of buying response to emotional sales appeal may be guessed by a short exploration into the history and culture of white as a color.

White has always been the royal color, taking precedence even ahead of purple. It has traditionally represented truce and peace. In scholastic degrees, white represents the arts and letters. In art it represents light, faith, joy and peace. White is the color of Easter, of the resurrection, of hope. Traditionally, it has stood for cleanliness and purity.

But, practically, what does white mean to the consumer? It is easy enough to make a test.

"There's no doubt of the consumer's preference," says Sales Manager Erwin Walker of Cyanamid's dyes department. "Put any woman in front of two piles of bed sheeting, one 'just white' and the other made 'whiter-than-white' by the Calcofluor method, and she will take only a moment to make her choice in favor of the latter."

Cellulosic Fibers

Calcofluor White ST is Cyanamid's whitening agent for cellulosic fibers that is especially recommended for "White Sales" fabrics such as sheeting, shirting, and other white fabrics or white background prints. In addition to being widely used on white goods, Calcofluor White ST, as well as the other Calcofluor Whites, are also used for brightening many pastel shades.

Calcofluor White ST may be applied to cellulosic fibers from baths with a pH of from 5.0 to 11.0. Other Calcofluor Whites (also water soluble) for cellulosic fibers are available for applications requiring lower bath pH than 5. These types are known as Calcofluor White T, which is very slightly greener than Calcofluor White ST, and Calcofluor White 2RT, which is slightly redder than Calcofluor White ST. Both these products are also applicable in the normal pH ranges and are recommended when a shade that is slightly greener or redder than White ST is desired.

When a Calcofluor is needed for application from a hypochlorite bath, Calcofluor White 4 BT is recommended. It is also recommended for other applications where a greener shade of white is desired. The water soluble product has excellent hypochlorite stability. Since practically all of the soaps and detergents on the market today contain optical bleaches, the brilliance of the Calcofluor White-treated fabric is restored each time it is laundered.

Wool, Silk and Synthetic Fibers

For brightening and whitening wool, silk and synthetic fibers, American Cyanamid offers several Calcofluor White RW types. These may be used to whiten or brighten raw stock, yarns, and knitted or woven fabrics. They are applicable to wool, silk, acetate, Acrilan, Arnel, nylon and Orlon 42.

No special equipment is needed for their application and in most cases they may be applied in conjunction with one of the normal wet processing steps. The cost of using Calcofluor Whiteners is "virtually negligible," Mr. Walker asserts, "because of the great economies in application that have been effected through increased solubility, stability and versatility gained by constant research and technological development."

While the Calcofluor White ST is the product most widely used for application to cellulosic fibers by the textile trade, the other types are often desired for some special property that they may possess. The cellulosic type Calcofluor Whites may be applied to cellulosic fibers by either exhaust or padding procedures on any of the conventional equipment normally used in the wet processing of cellulosic fibers.

These Calcofluors are being used extensively by the textile industry for application to cellulosic fibers in all forms, i.e., yarn, piece goods, etc. They may be applied in wet-out or scouring baths, in conjunction with the bleaching operation, during the finishing operation with starch, resin, or some types of softener, or even in a rinse bath.

Calcofluor White ST produces a reddish shade of blue fluorescence under untraviolet light and is normally used in concentrations of from 0.05 per cent to 0.20 per cent on the weight of the fiber. It is applicable in a pH range of from 5 to 11 at temperatures from 80°F. to 212°F. It is recommended by Cyanamid for all cellulosic applications except when the pH of the application bath is to be below 5 or when the brightener is to be used in conjunction with a chlorine bleach, or if the customer desires a redder or greener shade of white than that provided by Calcofluor White ST.

Calcofluor White 4BT produces a greenish-blue fluorescence in ultraviolet light and is much greener than Calcofluor White ST in daylight. It may be applied by the same methods as Calcofluor White ST, and because of its excellent stability to hypochlorite it may be applied in conjunction with the chlorine bleach.

Calcofluor White T produces what is classed as a neutral shade of blue fluorescence under ultraviolet light, and may also be applied to cellulosic fibers by any of the methods recommended for Calcofluor White ST. It is particularly suitable for applications that require the pH of the bath to be below 5. It may also be preferred by some users who desire a brightener with a shade that is slightly less red than Calcofluor White ST but redder than Calcofluor White 4BT.

Calcofluor White 2RT causes a reddish-blue fluorescence under ultraviolet light and has the same working properties as Calcofluor White T. It is mainly used when the working properties of Calcofluor White T are desired by users who prefer a redder shade. It is also slightly redder in daylight than Calcofluor White ST.

A Variety of Applications

The cellulosic Calcofluor Whites are at present being used for sheeting, shirting material, knitgoods such as T-shirts, dress materials, and print goods, but there is also a potential market for these products in the towelling, diaper and thread industries. These brighteners are not only being used on white goods, but are also finding a great deal of use in brightening pastel shades. Their application for this purpose is usually carried out either by adding the brightener directly to the dye bath or by applying it in the final rinse. And some printers have also found it advantageous to add a small amount of Calcofluor White ST to their discharge print paste to help produce clearer and cleaner discharge whites.

The Calcofluor White RW types are all chemically similar and are similar in all properties except strength and solubility. They may be used to whiten or brighten rawstock, yarns, knitted or woolen fabrics, and are applicable to wool, silk, acetate, Acrilan, Arnel, nylon and Orlon 42. The recommended concentrations and the application temperatures and procedures vary according to the fiber to which it is applied.

Calcofluor White RW is considered a 100 per cent type, while Calcofluor White RW Single is 20 per cent and Calcoflour White RWS is ten per cent in strength. The Calcofluor White RWS is the only one of these products that is water soluble. The other two types must be dissolved, before using, in alcohol or a dilute solution of either sulfuric or hydrochloric acid. After dissolving, these types are then diluted further with water.

The usual recommended concentrations of Calcofluor White RD (100 per cent type) are as follows, all percentages based on the weight of the fiber:

Fiber	*Recommended Concentrations*
Wool, silk	0.01 to 0.05%
Nylon, acetate, Arnel	0.01 to 0.03%
Acrilan, Orlon 42	0.02 to 0.10%

The Calcofluor White RW types may be applied by either exhaust or padding procedures. However, some of the new synthetic fibers require higher application temperatures than are normally used on wool, silk, acetate and nylon. As is the case with practically all brighteners, whether they are used on cellulosic fibers or on wool, silk or synthetics, present wet processing equipment is suitable for application and extra steps are not normally required.

Fluoro-chemicals:

Research in New Chemical Field Results In Oil-Repellent Treatment for Textiles

Minnesota Mining & Mfg. Co. has entered the textile finishing business with its "Scotchgard," a treatment for oil-repellency. This is the background of its development.

INDUSTRY was reminded last month that a whole new area of chemical research is now arriving at the production stage as Minnesota Mining and Manufacturing Co. (3M), St. Paul, Minn., announced its new "Scotchgard" brand oil-repellent textile treatment—the latest result of 3M's years of laboratory work and production in the fluoro-chemical field.

The infant fluoro-chemical industry is generally in the same position as the aluminum industry was 25 to 30 years ago. As is the case with aluminum, the natural availability of fluorine is very great. It is, for example, more abundant than copper, and 100 times more abundant than iodine.

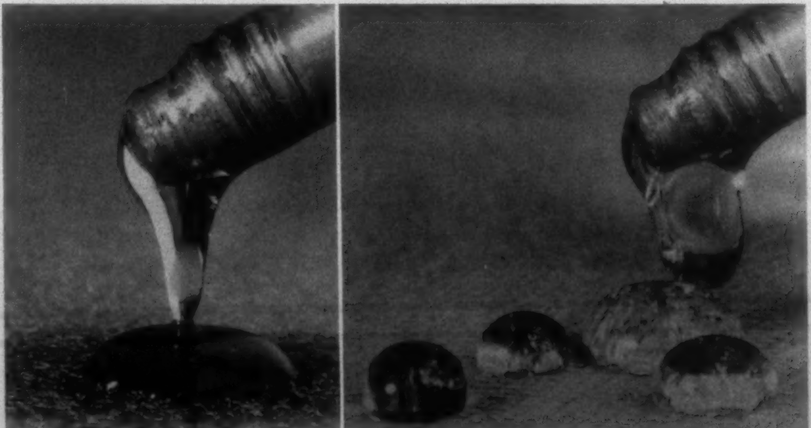
The same basic difficulty has slowed the development of the fluoro-chemical industry as slowed aluminum: new and novel processes had to be discovered to liberate and control fluorine before it could be industrially applied.

Like many other scientific discoveries that have had their first practical applications in the last decade, fluoro-chemicals and the technology of their handling were by-products of World War II.

It was the need during the 1940s for a liquid that could resist chemical attack and high temperatures that led to the development of fluoro-chemicals—or, as they were then called, "fluorocarbons." This earlier name derived from the substitution of fluorine for the hydrogen of a hydrocarbon compound, which is a first step in making fluoro-chemicals.

By the late 1940s, research developments at 3M had progressed to the point that many fluoro-chemicals were being produced in practical quantities for study and evaluation.

The story really begins, however, in 1886 when the



Left—Seen up close, this is the way oil works on untreated fabric. There is no resistance by the fabric to "wicking"—soaking up liquids. Note the spreading of the stain. Oil is among the hardest-to-repel of staining fluids.
Right—Oil-repellency in practice. On fabric protected by 3M's new "Scotchgard" brand oil-repellent textile treatment, drops of oil stand on the surface and do not penetrate. The treatment has no visible effect upon the fabric's appearance or feel.

noted French chemist, Henri Moissan, discovered that he could liberate fluorine from its mineral associations by passing an electric current through a fluorine compound. His discovery nearly killed him. Uncontrolled fluorine is one of the most vicious elements known to man. It is highly reactive, and in concentrated form can burn steel, water, and even asbestos, more than earning its early nickname, "the devil's breath."

After Moissan's freeing of fluorine, little was done with it because of the danger until the 1930s when it was used to produce a number of compounds such as the aerosol spray propellents and the chloro-fluorocarbon-type refrigerants.

But it was not until 1942 that the scientists learned to handle fluorine with any degree of safety. Much of their success in this was a result of a new electro-chemical method for producing fluoro-compounds devised by Prof. Joseph H. Simons, then of Pennsylvania State College. 3M acquired exclusive rights to this process and the products therefrom, which are now covered by several patents.

With fluorine finally under control, it was found to have many new use potentialities, especially as inert gases and plastics. 3M began to look into other possibilities—paper, rubber, textiles, leather.

Basic Properties of Fluoro-chemicals

By this time, the basic properties offered by fluoro-chemicals were fairly well understood. These are:

Stability—Fluoro-chemicals will not burn. They are unaffected by fuming nitric acid, hydrogen peroxide and concentrated caustic. They are nontoxic, and in inert form are being used as heat transfer fluids, insulators, pressure transfer media, and for protection of gauges and other industrial equipment.

High density—Replacing the hydrogen in carbon-hydrogen compounds with fluorine increases the density of the compound. Fluoro-chemical liquids are twice as heavy as hydrocarbons, and fluoro-chemical gases are five to ten times heavier than air. This makes the fluoro-chemical liquids useful as instrument fluids. In cases where a protective or inert atmosphere is required, the density of fluoro-chemical gases causes them to remain in place over a given surface.

Reactivity—Fluoro-chemical acids are especially strong and very reactive. This chemical activity is limited, however, to the functional components, with the carbon-fluorine portion of the acids remaining undisturbed. This means that the stable fluorocarbon character can be passed on, with the functional components as starting materials, for a host of fluorinated derivatives such as aldehydes, ketones, alcohols, esters, film-formers, and the like. The fluorocarbon basis can be extended, in fact, to produce chemicals which have a combination of properties not previously known.

Insolubility—Completely fluorinated liquids are insoluble in water and in most hydrocarbon liquids. Or, to put it another way, oil, water and fluoro-chemicals won't mix. Fluoro-chemical lubricants are immune to the solvent action of hydrocarbons. When fluoro-chemicals are introduced into paints, varnishes and similar surface treatments, they do a much more effective job of repelling oil and water than any previous treatment—which is one of the secrets of 3M's new oil-repellent treatment for textiles.

Surface activity—Some fluoro-chemicals are "surface active" agents—that is, they wet solid and immiscible ("non-mingling") liquid surfaces and spread rapidly. The world's "wettest" water is produced by dissolving a fluoro-chemical detergent in the water. Fluoro-chemicals are effective with organic liquids in a similar fashion. Equally important, the wetting and penetrating power of such potent chemicals as nitric acid, hydrogen peroxide and sulfuric acid can be increased by the addition of a fraction of a per cent of certain fluoro-chemicals.

Demand Grows For Textile Finishes

American Finishing Co., Memphis, Tenn., reports that it is expanding its facilities to meet a growing demand for its products.

The company said it has successfully completed trial runs on Dow Corning's new Sylmer finish to be used on decorative cotton fabrics, and that a germicidal Sanitized finish was recently added to the line. Another development announced by the company produces what amounts to gold and metallic printing on flat fabrics, as well as flannels.

In addition to its own products, American Finishing is licensed to produce a number of finishes developed by other companies, including American Cyanamid's Permel-Plus and Super-Set and Du Pont's ZeSet and Zelan.

REPAIRING MACHINERY PARTS WITH "PLASTIC STEEL" is one of the newest gimmicks in the textile industry. Marriner Combing Co., one of the largest wool top manufacturers in the world, recently repaired this large centrifuge with one pound of Devcon, a compound which is 80 per cent steel and 20 per cent plastic. An estimated $1,000 and several days of down-time was saved by using this material, manufactured by Devcon Corp. of Danvers, Mass.

TROUTMAN, N. C., MILL —

Electrical System at American Thread Modernized with Plug-In Bus-Duct

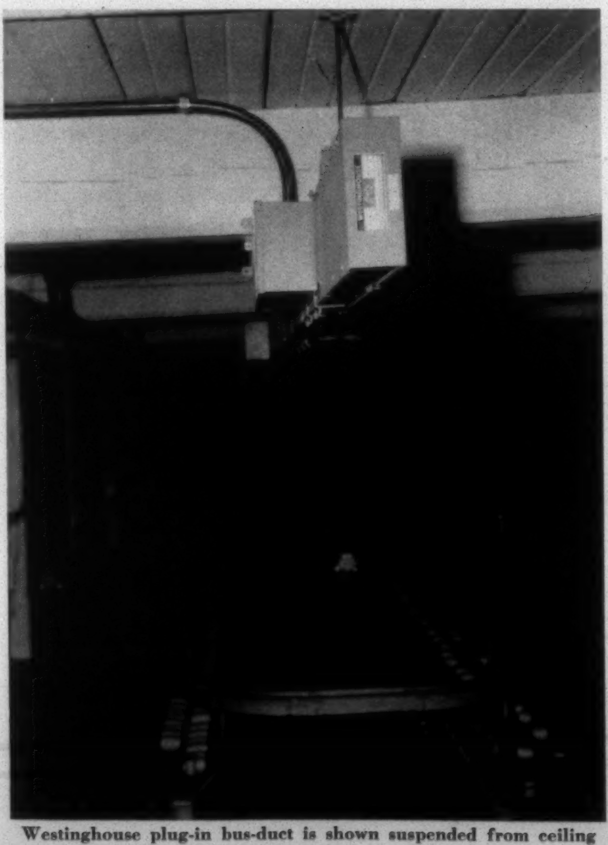
By JAMES McADEN JR., Editor

Wearied of making-do with an inefficient and troublesome power system, this plant installed a new plug-in bus duct arrangement.

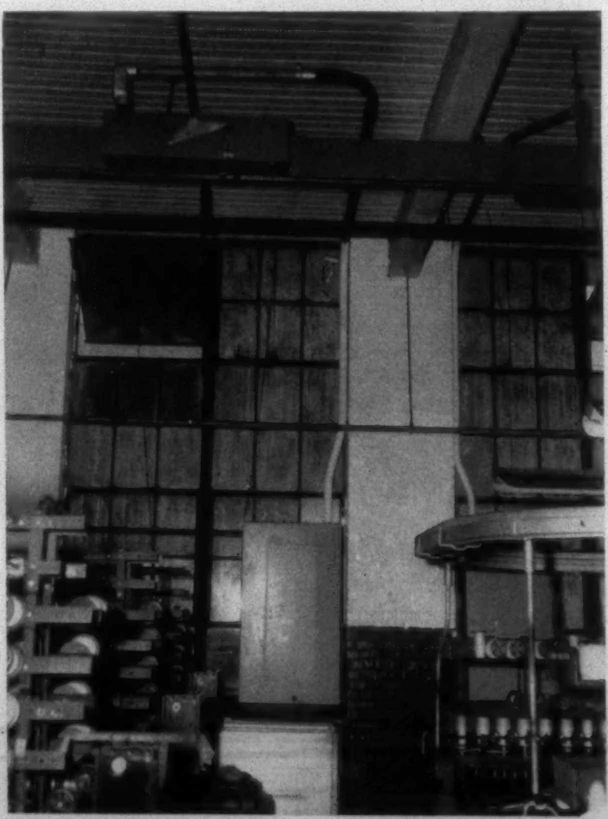
THE electrical system is one of the most important factors in any manufacturing plant. In the American Thread Co. plant at Troutman, N. C., the old system was outdated and, due to machinery installed over a period of years, was greatly overloaded.

The old electrical system was wired in conduit, with wire feeding different circuits throughout the plant. To correct the voltage drop and loads added to these circuits would have required a rewiring job. After engineering the conditions that existed and considering further expansion, the contractor decided to present the mill management with a choice of two systems, one using conduit and wire, the other using plug-in bus-duct.

When the mill management was told of the advantages of plug-in bus-duct over conduit and wire, a decision was not difficult. Once plug-in bus-duct was chosen there was a subsequent decision to make in respect to whether or not to rewire for all motors. The old conduit and wire were run under the floor and connections were made in junction



Westinghouse plug-in bus-duct is shown suspended from ceiling of American Thread Co. spinning room.



Power is taken from plug-in bus-duct down wall to circuit breaker panel.

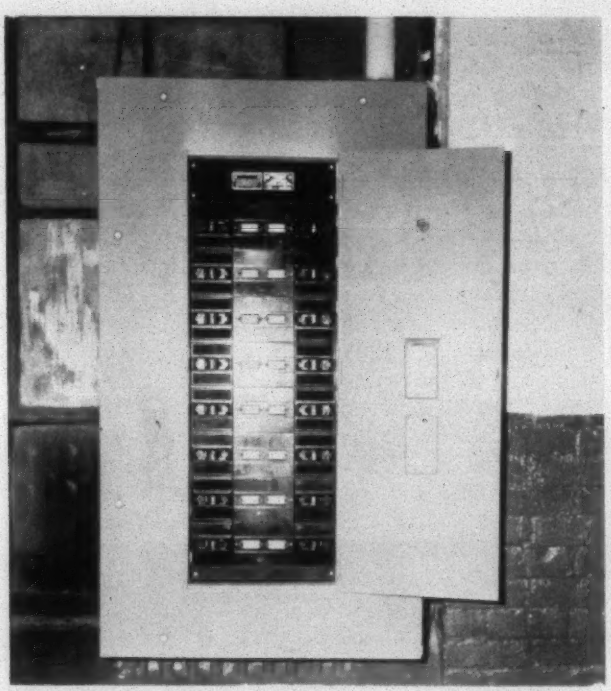
boxes, and from these junctions to a fuse switch on the end of each spinning frame.

When rewiring of all motors was indicated, a circuit breaker panel was installed for each row of motors. By having installed the plug-in bus-duct there was no problem locating the panels.

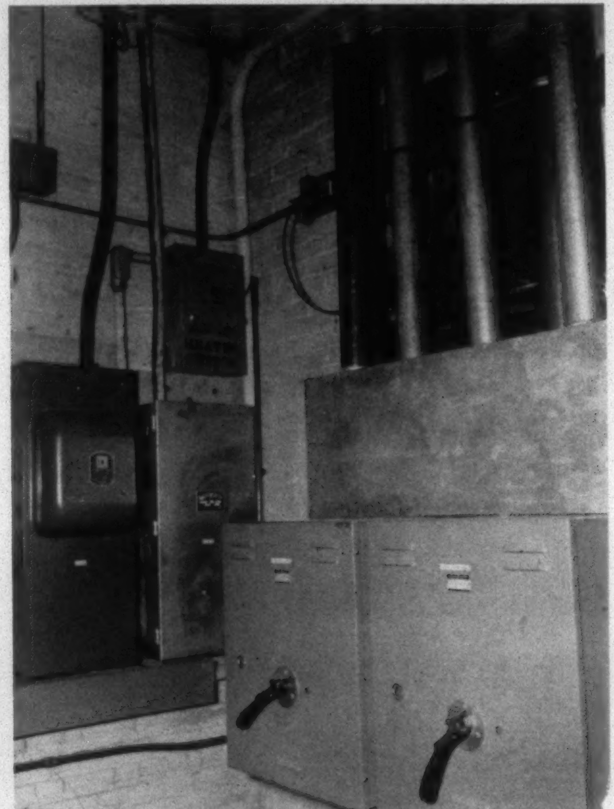
Some of the advantages claimed for the Westinghouse plug-in bus-duct employed at Troutman are: minimum installation time; no wasted power; minimum voltage drop; minimum time lost due to interruptions; minimum expansion cost; low maintenance and operating costs.

With the new system of individual panel breaker switches, individual lines to each machine can be cut off in order to work on or near the line side of the switch on the machine. This eliminates shutting down several machines as done in the past. With the former overload taken care of, occasional heavy demands do not give any more trouble. Also, future power expansion of 30 per cent can be taken care of very easily by merely plugging in extra switches where needed.

The contractor was Shell Electric Co. of Statesville, N. C., the job being supervised by P. Wesley Shell of that firm in consultation with Fred Broyhill, superintendent of the Troutman plant.



Circuit breaker panels are installed for each row of motors in the new electrical system at Troutman.



Switches controlling all circuits are located in this room at the Troutman, N. C., plant of American Thread Co.

At Sevier, N. C.:

American Thread Installs World's Largest Concentrated Pyrex Heat Exchanger System

By A. KEITH POOSER, General Engineer, The American Thread Co.

Heat exchangers of glass, designed and installed via the "do-it-yourself" approach, are proving to be practical at this Southern finishing plant.

THE world's largest concentrated system of Pyrex heat exchangers has just been put into operation by The American Thread Co. at its finishing plant in Sevier, N. C. This installation was preceded by nearly three years of engineering studies concerned with operating conditions and the analysis of comparative heat exchanger.

When The American Thread Co. moved its dyeing and finishing operations from Bristol, Tenn., to its plant at Sevier it became apparent in the first Winter of operations (1954-55) that something had to be done to relieve the high peak loads on the existing boilers. The first thought was the installation of a heat recovery system to pick up

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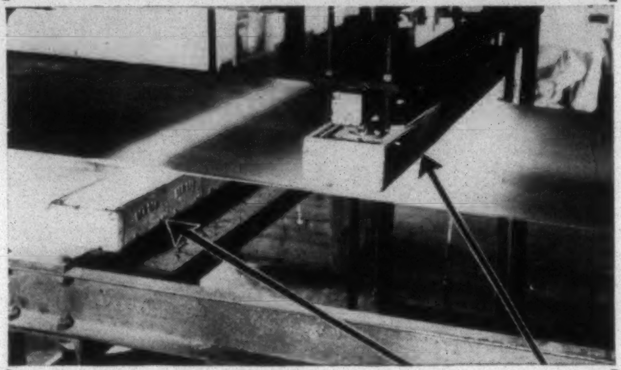

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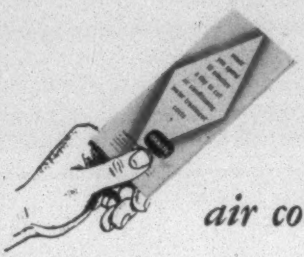

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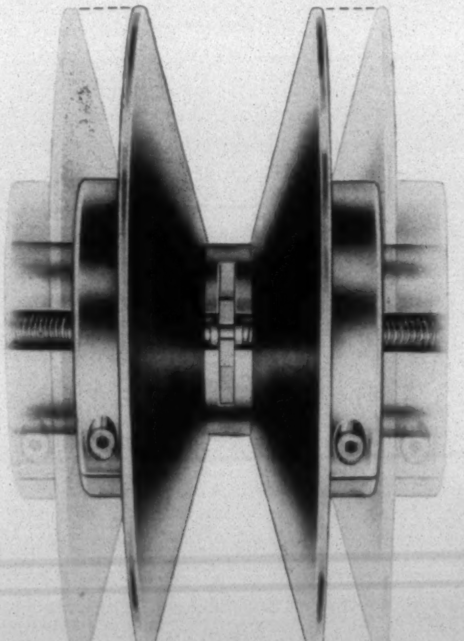

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heat from the dye liquor waste and utilize it to raise the temperature of the incoming fresh water.

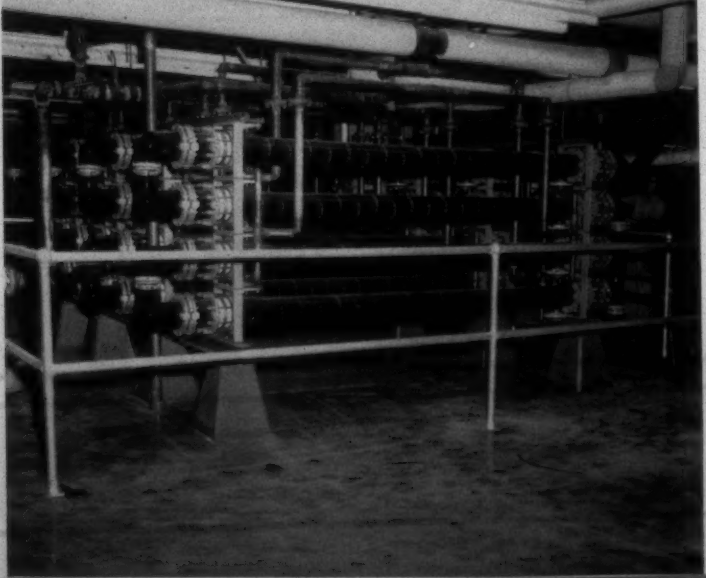
Detailed studies were then made to determine the average temperature of the dye waste, hot water loads, boiler loads and other information pertinent to the problem at hand. During the construction of the Sevier plant, daily temperatures of the raw water had been recorded for the period of one year. With this information at hand, investigation of various types of heat exchangers was made.

Due to the corrosive nature of the dry waste, no metal exchanger was considered other than one made entirely of stainless steel. This naturally is quite expensive. Exchangers of the open-pit type were considered as well as the shell and tube exchanger. For the quantity of waste water that is available and the amount of fresh water to be heated, the open-pit type required an extremely large and deep concrete pit which presented drainage problems as well as a suitable location problem.

At this point the Pyrex glass heat exchanger came into the picture, and a study of this type was made which finally proved to be the one that was installed. It was chosen because the corrosive product comes in contact with nothing but glass, Teflon and ceramics which means a minimum of maintenance. It is light and can be handled easily; simple in installation and can be quickly removed and replaced, if necessary. The glass tubes offer a resistance to the build-up of algae and scale, which often slows up the heat flow; the over-all heat transfer is considered satisfactory, and visual inspection is an advantage in pin-pointing the location of a tube leak. The exchangers can be arranged in series so that one unit can be removed for repair, and the remaining units can still operate. These are some of the advantages.

The installation at Sevier consists of 16 shell and tube exchangers, stacked four high and spaced in four groups horizontally, with the dye liquor making passes through the tubes of four units, and the fresh water making one pass through the shell of each unit. The 16 units each have 26 tubes with an I.D. of .69 inch and an O.D. of .75 inch, and an effective length of nine feet 10¼ inches, which produces an external surface area of 50.3 and is known as a 50 square foot unit. The tube wall conductivity coefficient K/1 = 260 b.t.u./hr./ft.^{2}/degree Fahrenheit. Tubes can withstand a temperature of 375° F. and a maximum pressure of 20 p.s.i. The maximum recommended pressure and temperature of the six-inch diameter shell is 20 p.s.i. and 200° F., respectively.

Sixteen shell and tube heat exchangers at the Sevier, N. C., plant of American Thread make up the unique Pyrex installation. They are arranged four high and four wide. Fresh water flows through each of the glass shells, and takes on heat from the dye liquor which flows through 26 tubes inside each shell.



Fortunately, at Sevier, there are a series of underfloor drain trenches that were large enough to install a partition down the center of each so as to provide a division between hot and cold water. This is accomplished by the installation of a special valve arrangement, devised by a member of the general engineering staff, to discard any waste water below an uneconomical temperature on one side of the partition and to save the hotter waste on the other side where it is dammed up at a central collection point and pumped through the heat exchanger. The valve "switch-over" is actuated by a thermostat set at a predetermined temperature, thereby saving only such waste considered as economical. After the waste liquor has made its last pass through the tubes, it then flows on out through the waste trench.

After the fresh water has made its pass through the shell, it is pumped into the hot water system for processing purposes.

Based on the average annual fresh water temperature, the system was calculated to produce an average rise of 37° F., which will reduce the peak loads on the boilers as well as cut down on fuel consumption. The over-all savings on boiler capacity will vary considerably during the year, but it is figured to reduce the hot water heating load more than 36 per cent.

While some industrial plants in this country and in Canada have more Pyrex heat exchanger units scattered around the plant in small groups than is located at Sevier, this installation is the largest of its kind in the world concentrated in one system.

The system was designed and laid out by the company's general engineering staff and was erected and installed by the Sevier maintenance department.

Principal equipment is as follows: *Pyrex glass heat exchangers,* size 50, Corning Glass Works; *Waste Water Pump,* size 3" x 4", with contact surfaces of Gould-A-Loy 20, Figure 3715, 500 g.p.m., Gould Pumps Inc.; *fresh water pump,* size 3" x 4", Figure 3755, 500 g.p.m., Gould Pumps Inc.; *pressure reducing valve,* 4" Fisher Type 657KR, 4100 UR Wizard air pilot operated pressure control, Fisher Governor Co.; *waste water piping and fittings,* Pyrex glass, Corning Glass Works, and stainless steel; *cold water piping and fittings,* copper; *expansion joints in waste system,* Teflon, R/M 865, Raybestos-Manhattan Inc.; *trench partitions,* Chemstone sheets, Johns-Manville Inc.; *partition coating,* three coats epoxy paints, E. I. du Pont de Nemours & Co.; *instruments,* miscellaneous on hand; *waste water valves from machines,* special design, The American Thread Co.

The system has just recently been put into operation, but already the preliminary results indicate that the design figures might be more than achieved.

The first industrial advertisement to appear in the United States was textile in character. Published in 1789 by two Philadelphia Quakers, it consisted of a request that anyone smuggling textile machinery plans from England get in touch with them. Samuel Slater noticed the ad and soon afterward founded the American cotton textile industry.

Promotions, Resignations, Honors, Transfers, Appointments, Elections, Civic and Associational Activities

PERSONAL NEWS

Universal Winding Co. has announced a consolidation of its domestic sales, aimed at strengthening its sales activities and providing more effective service to the textile industry. Under the new sales organization plan, all of the company's domestic sales territories will be consolidated into five sales districts designated as New England-Midwest, Mid-Atlantic, Southern, Pacific and Canadian. Three of the districts will be headed by district managers who will be responsible to the sales manager. Frank P. Barrie has been appointed to the new position of district manager in the Southern district, with his headquarters continuing at Charlotte, N. C. As district sales engineers Frederick J. Berrows and J. Bertram Howarth have been assigned to the Southern district. The separate divisions of winding and twisting will be merged into one textile machinery division. As assistant sales manager, Thomas L. Cotter will aid Jesse W. Stribling, who was recently appointed sales manager of this division. The newly-formed activity for distributing Brush Electronic Co.'s products is being separately organized as the instrument section within the textile machinery division, and headed by Robert H. Wallace, manager, who will be responsible to the sales manager.

Frank P. Barrie

W. H. Fann has been appointed manager of the Slater, S. C., plant of the synthetics division of J. P. Stevens & Co. Inc. Mr. Fann was formerly in charge of the Slater operation and is returning in a similar capacity. R. W. Couch Jr. continues as superintendent of the plant.

George W. Johnson Jr. has been appointed sales representative in Georgia and Alabama for Chemical Processing Co., Charlotte, N. C. Mr. Johnson was formerly with Hart Cotton Mills, Tarboro, N. C.

Frederick N. Spoerl, assistant sales manager of the foreign and domestic sales departments, H. W. Butterworth & Sons Co., Bethayres, Pa., has retired after 44 years with the company. Mr. Spoerl joined Butterworth's engineering department in September, 1912, and became manager of the Providence, R. I., sales office in 1935. Following service in World War II, he was assigned to the Philadelphia sales office where he remained until 1949 first as assistant sales manager and later as sales manager of the foreign department. In 1949 he was appointed to the position which he held at the time of his retirement. He will continue to be available to Butterworth in a consulting capacity.

John F. Daley, general manager of the organic chemicals department, E. I. du Pont de Nemours & Co. Inc., Wilmington, Del., has been elected a director, vice-president and member of the company's executive committee. Mr. Daley joined Du Pont in 1915. Before his appointment as general manager of the organic chemicals department in 1948 he was general manager of the pigments department. Succeeding him in the organic chemicals department is Samuel G. Baker, who has been general manager of the photo products department.

Fred W. Symmes, president of Piedmont Plush Mills, Greenville, S. C., was recently honored by the Greenville Rotary Club for 40 years' service. Mr. Symmes, a past president of the old American Cotton Manufacturers Association, is a director of United Merchants & Manufacturers Inc.

Four promotions have been announced by Rock Hill (S. C.) Printing & Finishing Co. Harold Connelly, a divisional superintendent, has been elevated to assistant general superintendent. . . . Dave Vipperman has been promoted to superintendent of the Grier division. . . . Herman Weisz has been named divisional superintendent in charge of the color, soaper and ager department. . . . Howard J. Gordon has been named divisional superintendent of economy, safety, laundry, plisse, claims and allowances.

J. E. (Jack) Crosland has resigned as vice-president and general manager of Lyman (S. C.) Printing & Finishing Co., and J. O. Lindsay has been named his successor. Mr. Crosland, who expressed a desire to retire some time ago, was graduated from Clemson College in 1923 and was employed by Pacific Mills at Lawrence, Mass., for one year. He was transferred to Lyman in 1924 to assist in putting the plant into operation. He served in various capacities and was made manager in 1955. Shortly after the Lyman plant was purchased by M. Lowenstein & Sons, he was made a vice-president and general manager. . . . Mr. Lindsay, a graduate of Harvard University, began his textile career with Pacific Mills in 1924. He rose to chief engineer and a few months ago was named assistant general manager. Upon succeeding Mr. Crosland, Mr. Lindsay announced the immediate promotions of Jack L. Green from general superintendent to assistant general manager; Fred H. Parris from assistant general superintendent to general superintendent; E. S. Hensley from master mechanic to plant engineer; and Sam Lynn from shop foreman to master mechanic. . . . Ned Bobo has been named staff assistant to William H. Grier, executive vice-president of Rock Hill (S. C.) Printing & Finishing and Lyman Printing & Finishing. Mr. Bobo joins Ben May of Rock Hill in a liaison capacity between Rock Hill and Lyman.

Aubrey Mauney, Kings Mountain, N. C., textile executive, has been named first vice-president of the Brotherhood of the United Lutheran Church. Mr. Mauney has been very active in the brotherhood for the past several years and was named acting executive secretary of the organization last January. He is also a member of the executive committee of the Brotherhood of the Lutheran Synod of North Carolina, Synod Director of Scouting, and a member of the National Lutheran Scouting Committee.

E. P. Henley

E. P. (Gene) Henley has been named technical sales representative in North Carolina and Virginia for Crown Chemical Corp. of Providence, R. I. Mr. Henley, who will make his headquarters in Greensboro, N. C., has been associated with Burlington Industries, Mathieson Chemicals and, most recently, Dexter Chemical Corp.

Alfred Greenfield has been named assistant sales manager of the fiber division of Virginia-Carolina Chemical Corp. Mr. Greenfield joined the company's sales staff in 1955.

Don Rich, former general overseer of weaving at the Brandon Rayon Mill of Abney Mills at Greenville, S. C., has been named general plant manager for A. Schottland Inc., Rocky Mount, N. C.

G. Don Davidson Jr., formerly a vice-president in the sales department of Package Products Co. and its commercial printing division, Herald Press, Charlotte, N. C., has been named vice-president in charge of sales. In his new post, Mr. Davidson assumes the duties formerly handled by T. J. Norman Jr., executive vice-president. Mr. Davidson joined Herald Press in 1936, and became one of the founders of Package Products Co. when that firm was organized in 1946. When the two firms merged in November 1955, he became a vice-president.

Leon Lowenstein, chairman of the board of M. Lowenstein & Sons, was recently presented the third annual human rights award given by the Joint Defense Appeal at a dinner at the Waldorf-Astoria Hotel in New York City. The Joint Defense Appeal is the fund raising agency for the American Jewish Committee and the Anti-Defamation League of B'nai B'rith. The award, a silver medallion, is given to business and civic leaders "whose contributions to the national welfare epitomize the ideals of American freedom."

A. G. Ashcroft

A. Griffin Ashcroft has joined the staff of Arthur D. Little Inc., consulting research company, Cambridge, Mass. Mr. Ashcroft, vice-president and director of research and development of Alexander Smith & Sons Inc. for over 20 years, will make his headquarters in New York City. A former president and member of the board of trustees of the Textile Research Institute, he has received citations for his technological contributions from the American Standard Association and from the American Society for Testing Materials, as well as the Harold De Witt Smith Memorial Award for his leadership in textile research and science. A graduate of Cornell University, with a degree in mechanical engineering, Mr. Ashcroft has done post-graduate work at Massachusetts Institute of Technology, the University of Pittsburgh, Columbia University and New York University.

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O. G. Murphy, assistant general superintendent of Borden Mills Inc., Kingsport, Tenn., has been named selling agent in Atlanta, Ga., for Whitin Machine Works. Prior to his association with Borden, Mr. Murphy had been with West Point (Ga.) Mfg. Co., Mt. Vernon Mills, Dennison (Tex.) Cotton Mill Co. and Postex Cotton Mills, Post, Tex.

William F. Eubanks has been named overseer of the cloth finishing department of Dyersburg (Tenn.) Cotton Products Inc. In his new post Mr. Eubanks succeeds Richard E. Donner, secretary of the mill, who has headed the cloth finishing department for many years. Mr. Eubanks joined the firm in 1939, and was assigned to the cloth finishing department at the time of his promotion.

Stanley Sianglin Ho has joined the research department of Shawinigan Resins Corp., Springfield, Mass., where he will assist Dr. R. F. Nickerson in the company's expanding textile research group. He received a B. S. degree in chemistry from St. John's University, Shanghai, China; a M. S. degree in textile chemistry from Georgia Tech in 1950; and a M. B. A. degree from New York University in 1952. He is a member of the American Association of Textile Chemists & Colorists.

Clarence E. Elsas has been elected president of Fulton Bag & Cotton Mills, Atlanta, Ga., succeeding R. O. Arnold who has resigned to devote full time to other activities. Mr. Elsas began his career with the company in 1926. He was elected vice-president last June when a new controlling group purchased the company.

Richard Higgins, president of The Kendall Co., Boston, Mass., and Wayne J. Holman Jr., president of Chicopee Mills Inc., New York City, have been elected to the board of directors of the American Management Association. Mr. Higgins was named to a three-year term, and Mr. Holman will serve for two years.

J. A. Nasmith, vice-president of Universal Winding Co., Providence, R. I., is to be honored at the Textile Institute Convocation in Manchester, England, Friday, Oct. 26. Mr. Nasmith is one of seven institute members who will receive a Companionship, the only American member to receive such an honor. He is a former chairman of council on which he served from 1948 to 1955. He is currently vice-president of the institute and a member of its American panel. The Companionships are awarded by the institute to recognize its members who have "substantially advanced the general interests of the textile industry."

J. S. Meadors of Danville, Va., has been named overseer of weaving, second shift, Borden Mills Inc., Kingsport, Tenn.

Dr. Louis M. Wise has joined the research staff of Emery Industries Inc., Cincinnati, Ohio, where he will be associated with the process research section. He will be in charge of research on dry cleaning processes for Emery's Sanitone Division. Dr. Wise is a native of Toronto, Canada, and was previously with Hercules Powder Co. as project leader for textile finishes in that firm's application research group. He is a member of the American Chemical Society and the American Association of Textile Chemists & Colorists.

George W. Sarti Jr.

George W. Sarti Jr. has been appointed sales representative in North Carolina and Virginia for Metro-Atlantic Inc., Centredale, R. I. Mr. Sarti was previously employed for three years in the dyeing and finishing department of the Old Fort (N. C.) Finishing Co. A native of Greensboro, N. C., he is a graduate of Asheville-Biltmore College and has served four years in the Navy as a radar technician.

Basil D. Browder, executive vice-president, Dan River Mills, Danville, Va., has been named a member of the 1956-57 Policy Committee of the U. S. Chamber of Commerce. The committee will consider and report on all proposals on policy declarations to be submitted to the chamber's 1957 annual meeting. Policy approved by delegates to the annual meeting become the chamber's position on national issues.

Sidney T. Perkins, a member of the cotton department at Dan River Mills, Danville, Va., has been transferred to Anchor Rome Mills Inc., Rome, Ga., to head up cotton operations there.

Frank J. Schenkelberger has been named chief engineer of the industrial products division of The Colson Corp., Elyria, Ohio, manufacturer of casters and material handling equipment. Mr. Schenkelberger previously was associated with the Baker Raulang Co., Cleveland, Ohio, where he was chief engineer in charge of load handling equipment. Prior to that he served in engineering capacities for Thompson Products Co. and Warner & Swasey Co., both of Cleveland.

John Williams, superintendent of the Modena Plant of Burlington Industries in Gastonia, N. C., has been transferred to company headquarters in Greensboro, N. C., to assume the post of assistant to the division manager of the company's spun spinning division. In this new post he succeeds Alex James who, in turn, succeeds Mr. Williams as Modena superintendent. Mr. Williams, a native of Landis, N. C., has been superintendent at Modena since October 1955. Prior to that he had served in various manufacturing capacities, including that of general overseer at the company's Lakedale Plant in Fayetteville, N. C., and the St. Pauls, N. C., plants. He joined Burlington in 1952 after three years affiliation with another textile firm. He is a graduate of the University of North Carolina. . . . Mr. James has served previously in the Gastonia operations of the company, having been assigned there in 1948-49 as quality supervisor for the Flint No. 1 and No. 2 Plants. Following this service he returned to Greensboro and was made head of the spun weaving and spun spinning quality control departments. In September 1955 he was promoted to the post of assistant to the spun spinning division manager, the post he is now exchanging with Mr. Williams.

W. Ray Shockley

W. Ray Shockley, staff member of the *Atlanta Journal* since early 1952, has joined the public relations staff of the American Cotton Manufacturers Institute. Mr. Shockley will make his headquarters in Atlanta. His duties will be primarily concerned with the textile industry of Georgia, but as a member of the A.C.M.I. staff, he will also deal with the entire textile industry. He is a native of Morgan County, Ga., and a journalism graduate of the University of Georgia.

Dr. A. N. J. Heyn, Clemson College professor of natural and synthetic fibers, has been elected a Fellow of the American Association for the Advancement of Science. Dr. Heyn, a native of Holland and a member of the Clemson faculty for eight years, was also recently presented membership in the New York Academy of Science, a national organization, and he was named to American Men of Science and Leaders of Science in the South.

Jean Pelletier

Jean Pelletier, recently named sales engineer in Canada for the H. F. Livermore Corp., Boston, Mass., manufacturer of improved loom parts, spent the month of September in Livermore's Greenville, S. C., office training for his new position. Mr. Pelletier, a native of Montreal, Quebec, has now set up his headquarters in Montreal and will be in charge of sales and distribution of Livermore products throughout the company's Canadian territory.

R. J. Jewell has been appointed Southern district sales manager for the textile division of Celanese Corp. of America, succeeding R. M. Salisbury. Mr. Jewell, who was transferred to the Charlotte, N. C., office of the firm in January 1953 as assistant sales manager, filament yarn, was previously in the customer service department of the company's New York office. He began work with Celanese in the Amcelle Plant, Cumberland, Md., in 1934. . . . R. H. Powers, manager of the sales order department, succeeds Mr. Jewell as assistant to the sales manager, filament yarn. Mr. Powers joined Celanese in 1949 in the woven fabrics department of the company's New York office and subsequently became a member of the yarn sales department. He was transferred to Charlotte in 1953. . . . Charles F. Beran is retiring as a director of the company following 33 years' association with the firm. Mr. Beran joined Celanese in 1923 and helped direct construction of the first Celanese plant in Cumberland, Md. In 1939 he became vice-president in charge of plant construction and maintenance, and in 1942 was named vice-president in charge of production. . . . Richard W. KixMiller, vice-president in charge of the Celanese chemical division, succeeds Mr. Beran as a director.

Adrian J. Stewart, technical representative in charge of the chemical sales office of Atlas Powder Co. in Atlanta, Ga., has been transferred to the company's international chemical sales department in Wilmington, Del. Succeeding him in Atlanta is Robert L. Herrman Jr., formerly in the company's product development department at Wilmington.

Isom James McClellan has joined Borden Mills, Kingsport, Tenn., as general superintendant of weaving. Mr. McClellan was formerly with Waverly Mills, Laurinburg, N. C., where he was also superintendent of weaving. He is a native of Hartwell, Ga. . . . James E. Buchanan of Fort Mill, S. C., has been named night overseer of weaving.

J. Philip Cleaveland, plant manager of the Unity Plant, Elmrose Division, Callaway Mills Co., LaGrange, Ga., has been elected to the LaGrange City Council. Mr. Cleaveland has been with Callaway since January 1936.

D. H. Morgan has been named superintendent of Bama Cotton Mills, Enterprise, Ala. Mr. Morgan was formerly superintendent of Denison (Tex.) Cotton Mill Co.

Ralph C. Cobb has been appointed in charge of production at the synthetic textile fiber center planned by The Dow Chemical Co. near Lee Hall, Va. Since 1953 Mr. Cobb has been superintendent of two saran production plants at Dow's headquarters in Midland, Mich. A mechanical engineer, he will join key personnel from Dow divisions at Midland and Pittsburg, Cal., in planning for commercial production of Zefran, the company's new synthetic staple fiber.

OBITUARIES

Lewis Carroll Atkisson, 62, president of Textile Specialty Co., Greensboro, N. C., died Sept. 26 in Greensboro. He is survived by his widow and a brother.

George A. Bates, 77, assistant treasurer of Palmetto (Ga.) Cotton Mills Inc. until his retirement in 1949, died recently in Newnan, Ga. Survivors include his widow, two daughters and two sons.

Stokes F. Burtis, 63, former manager of the Lincolnton, N. C., and Winston-Salem, N. C., plants of Duplan Corp., died early this month in Winston-Salem following a long illness. Mr. Burtis, a native of Mount Holly, N. J., joined R. K. Laros Silk Co. of Bethlehem, Pa., in 1923. When Duplan took over the silk yarn processing equipment of Laros at the beginning of World War II, Mr. Burtis joined Duplan and established the equipment in the firm's first North Carolina processing plant in Winston-Salem.

Dr. Camille Edward Dreyfus, chairman of the Celanese Corp. of America, died Sept. 27 in New York City. Since 1945, Dr. Dreyfus had been chairman of Celanese, and for 27 years prior to that he had served as president, from the time of the corporation's founding in 1918. He also was president of Canadian Celanese Ltd. and managing director of British Celanese Ltd. Early basic research in cellulosic chemistry undertaken by Dr. Dreyfus and his brother, the late Dr. Henry Dreyfus, led to the founding of the three companies. The Dreyfus brothers were natives of Basel, Switzerland. Surviving Dr. Camille Dreyfus are his widow and a brother, Emille, of Basel.

Isaac D. Hopper, 57, former overseer of carding, Gayle Plant, Springs Cotton Mills, Chester, S. C., died recently.

James T. Hunter, 64, president of the James Hunter Machine Co., North Adams, Mass., died Oct. 7 at his home in Stamford, Vt. Mr. Hunter had been president of the family textile machinery manufacturing concern since 1947. He is survived by his widow and two sons.

Fred G. La Piana, 71, who served for many years as director of textile research for Stein, Hall & Co. Inc., died Sept. 20 after a year's illness. Mr. La Piana joined Stein Hall as a sales technician in 1925. Following work in sales, he established textile laboratories for the company at Charlotte, N. C., and Providence, R. I. He spent a number of years in Providence as chief chemist and then director of technical research and later was responsible for organizing and directing the movement of the Providence laboratory to its present facilities at Pawtucket, R. I. Mr. La Piana retired from the company in 1955 but continued to serve on a consultant basis up until his death. Survivors include his widow and a son.

William Bell Lawson, for 40 years secretary and assistant treasurer of Pacolet (S. C.) Mfg. Co., died Sept. 30 at Spartanburg, S. C. Mr. Lawson had been retired for a number of years. Surviving are his widow and a brother.

William Pickney Ligon, 59, vice-president in charge of cotton for Reeves Bros., Spartanburg, S. C., died last month in Spartanburg. He had been with the company since 1927. Survivors include his widow, two daughters and two sisters.

Dorris C. Mauney, 75, president of Bonnie Cotton Mill, Kings Mountain, N. C., died recently in Charlotte, N. C. Mr. Mauney was also secretary and treasurer of Sadie Cotton Mills Co. and a director of Kings Mountain Mfg. Co., both in Kings Mountain. He is survived by a son, a daughter, two brothers and a sister.

Isaac S. McManus, 71, retired superintendent of several North Carolina textile mills, died Oct. 14 after a long illness. Mr. McManus, who made his home in Matthews, N. C., had been superintendent of Efird Cotton Mill, Albemarle; Lumberton Mills, Lumberton; Red Springs Mills, Red Springs; St. Pauls Mills, St. Pauls; and Johnston Mfg. Co., Charlotte. He retired in 1947. Surviving are his widow, a son, three daughters, three brothers and four sisters.

MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

NEWBERRY, S. C.—Installation of equipment is now under way in the recently-completed three-story addition to Newberry Mills here. The addition, built between the No. 1 and No. 2 plants, contains some 40,400 square feet of floor space. The expansion will permit Newberry to add about 21,500 spindles and 366 looms. Some 120 employees will be added by the time production gets under way in the addition next April.

LYMAN, S. C.—Three improvement projects have been completed recently at Lyman Printing & Finishing Co. here, a subsidiary of M. Lowenstein & Sons. The projects, representing an investment of more than $300,000, include a new warehouse with an area of 20,000 square feet of floor space, an oxidation system to curb stream pollution, and a 550-acre water storage lake.

SELMA, N. C.—C. & H. Enterprises of Atlanta, Ga., has purchased the physical property and machinery of Selma Mills here, which shut down several weeks ago. A representative of the Atlanta firm said there is a possibility the mill may be sold to a textile operator and the machinery sold and dismantled as a separate unit. Harry Young, who is continuing as manager of the mills until December, said a quantity of cloth would be maintained until the property changes hands.

WEST POINT, GA.—West Point Mfg. Co. has awarded seven textile scholarships to Alabama Polytechnic Institute, Auburn, Ala., for the coming year. Recipients are D. A. Pope, Columbus (Ga.) Mfg. Co.; B. L. Miller, Fairfax, Ala.; Donald M. Pierce, Fairfax; Richard B. Terry, Langdale, Ala.; Charles D. Smith, Riverdale (Ala.) Mill; and J. T. Denney, Milton, Ala.

SHELBY, N. C.—J. W. Wood Elastic Web Co. of Staunton, Mass., has contracted for construction of a plant here to produce high tensile strength cotton webbing. Plans call for a building containing about 30,000 square feet of floor space. The plant, which will employ some 60 persons, will represent an investment of $750,000, including cost of equipment and machinery.

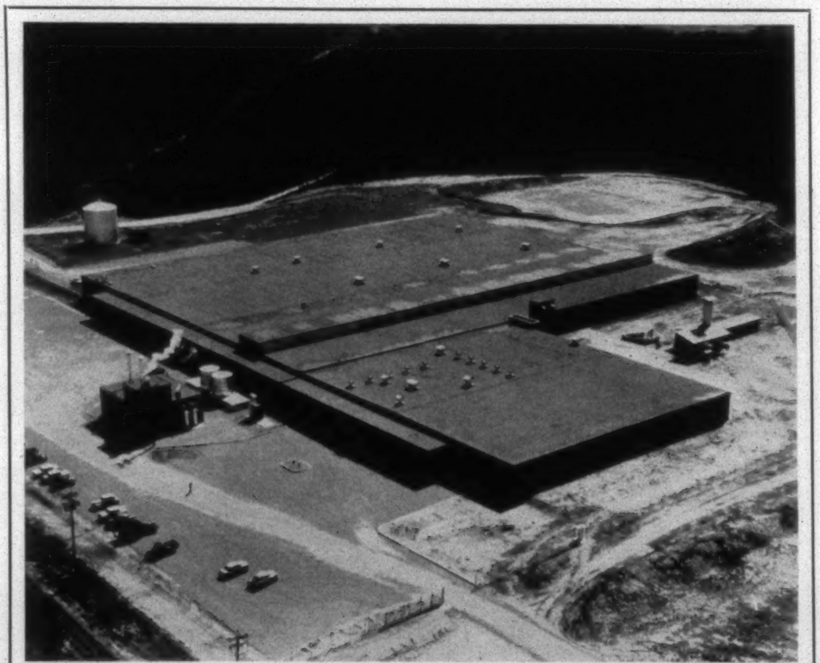
TROUTMAN, N. C.—American Thread Co has announced that it plans to sell its company-owned homes here to employees or other members of the community. Employees now living in the houses will be given first consideration among the prospective buyers.

ABERDEEN, N. C.—Amerotron Corp. is closing down its plant here and will combine the operation with the company's plant at Red Springs, N. C. Stock now in process at Aberdeen will be run out department by department on a five-day week. This is expected to take until the middle of November. According to Robert L. Huffines, Amerotron president, all opening, picking, carding drawing, roving, spinning and winding equipment will be transferred to Red Springs, where additional space has been provided. Some 300 persons will be added at the Red Springs plant, and the 500 Aberdeen employees will be given job priority. The transfer was made necessary, Mr. Huffines said, due to heavy continuing losses at Aberdeen.

CHARLOTTE, N. C.—Johnston Mfg. Co., here, was recently presented a certificate of merit for conspicuous achievement in industrial accident prevention by the Liberty Mutual Insurance Co. The award was made in recognition of a record of over 600,000 man-hours worked without a lost-time accident, a period extending from Aug. 3, 1955, to Aug. 1, 1956. W. L. Brightwell, superintendent, received the award on behalf of management and employees.

MACON, GA. — Bachmann Uxbridge Worsted Corp. plans to concentrate its worsted cloth production in its three Southern plants and to concentrate its woolen and auto cloth production in its Northern mills. The company's Southern operations are located here, at Cedartown, Ga., and at Talladega Ala. In line with this plan, the company announced, three operating divisions will be set up—woolen, worsted and auto cloth. Heading up the worsted division will be Harry S. Stern Jr., vice-president, and Gordon Sweenie, general manager in charge of all worsted manufacturing.

CHARLOTTE, N. C.—Spatex Corp. has announced it will close its Hoskins Plant here when work on current orders is completed. The plant operates some 34,000 spindles and 600 looms, producing combed lawns. According to D. A. Jordan, Spatex president, the decision to suspend operations was made in face of high production costs and low selling prices of lawns.

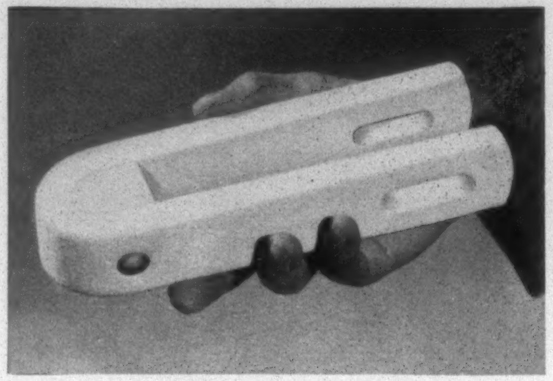


WEST POINT GOES INTERNATIONAL IN PRODUCTION OF NON-WOVEN FABRICS—The first U. S. manufacturer of non-woven fabrics to expand production into an international operation is West Point (Ga.) Mfg. Co., which has announced that agreements have been reached with Tootal Ltd., of Manchester, England, for the formation of a jointly-owned company to manufacture non-woven fabrics under West Point's patents. The new facilities in Manchester will be patterned after the Lantuck Division of West Point Mfg. Co. *(above)* at Fairfax, Ala., which has been supplying non-woven fabrics for industrial and consumer uses since 1949. Production of Lantuck non-woven fabric in England is expected to start in the near future.

Last year the company's non-woven fabric production capacities were more than tripled by $2,500,000 modernization and expansion program which included the construction of this completely new plant of 190,000 square feet in Fairfax, Ala.

Lantuck found one of its earliest and best applications in the textile field. Bobbin heads made of Lantuck-based laminate were found to have nearly twice as much inpact-fatigue resistance as the next strongest type (paper-and-canvas reinforced). Lantuck-reinforced vibrator blocks, used in looms, last 60 times as long as wood blocks. Lantuck is credited with having played an important part in the "high-fashion" revolution in automotive design, through its use as backing for vinyl upholstery. Similarly important contributions to the furniture industry and other fields have been made by Lantuck-backed materials. One of the most dramatic applications of non-woven fabrics is in the field of interlining for wearing apparel. West Point's entry in this market is called Interlon, and it is used for shaping suits, dresses, coats, accessories and colorful underskirts.

HARRIS HEAVY DUTY LUG STRAPS AND HOLD UPS



All Canvas Lug Straps and Lug Strap Hold Ups are made of the best quality materials we can buy, put together with the best workmanship. Lug Straps are available with or without plugs in 1" increments from 8 to 18 inch lengths and in 1½ and 2 inch widths. Partial or full leather lining available to suit requirements. Lug Strap Hold Ups available in all standard sizes in either canvas, leather or hairon leather.

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MILLBURY, MASSACHUSETTS

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R. E. L. Holt, Jr. Associates, Inc.
P. O. Drawer 1319
1910 E. Wendover Avenue Greensboro, N. C.

Adamstop detects *all* roving failures and stops frame *Instantly!*

INCREASED PRODUCTION

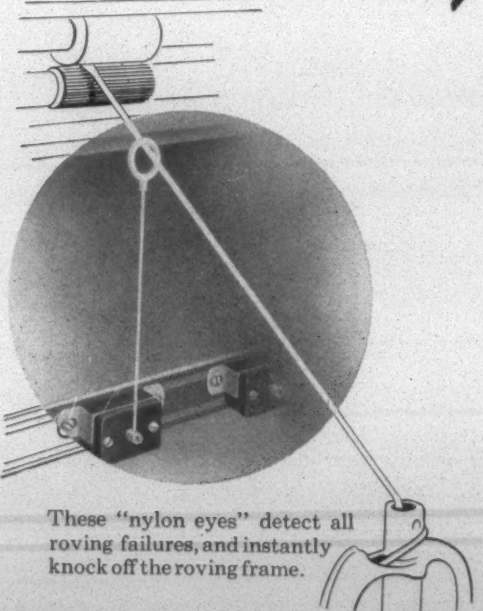
Adamstop's instant stop motion for roving prevents doubling, fly-overs, and other wasteful and production damaging failures. The Adamstop "nylon eye" monitors every inch of roving production from sliver to spindle . . . . detecting lap-ups, plugged flyers, bad splices, singlings and other roving failures. Adamstop reduces ends down and increases production quality and efficiency.

INCREASED JOB ASSIGNMENTS

Adamstop instantly detects roving failures and stops the roving frame. This allows the roving operators to supervise more spindles. Plants now using Adamstop have increased roving job assignments 25% to 50%.

SAVES TIME AND MONEY

Adamstop is on the job 24 hours a day . . . *but never on the payroll.*. Adamstop instant stop motion eliminates waste, increases production, saves on manpower, and protects the roving frame from damage. Let Adamstop help you save time and money in your plant.



These "nylon eyes" detect all roving failures, and instantly knock off the roving frame.

ADAMS, INC., 209 East Stone Ave., Greenville, S. C.

Chattanooga Yarn Association Outing

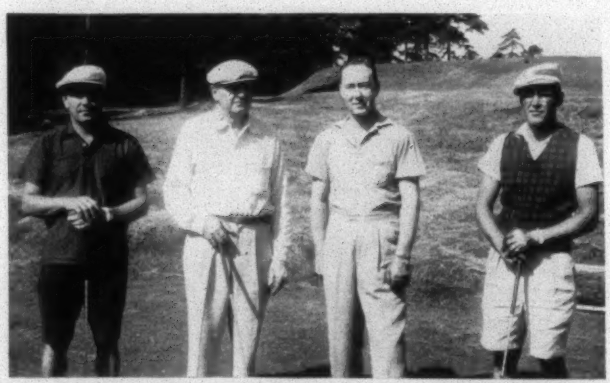
THERE was good fellowship, golf playing, skeet shot and shot at, plus some reported elbow-bending, during the 31st annual outing of the Chattanooga Yarn Association Sept. 20 and 21 at the Lookout Mountain Hotel. More than 250 yarn trade peddlers and customers were on hand, and almost half of them won prizes of various descriptions—adding to the pleasant atmosphere.

Guests who won golf prizes, determined by the Calloway System, were: Dick Thomas, 143.5; M. C. James and Felmont Eaves, 144; John Gay, 145; Everett Moore, 146; John Everett, Sam Hodges, Paul Johnson and Rip Hardeman, 147; Jack Jones, Rudd Hardesty, Gordan Dudley and Jim Dudley, 148; Charles Heath, Peyton Carter, Art Cobble and Larry Jenkins, 149; Jim Bryson, 149.5; Tony Mozur, J. R. Burgess, Jim Wilkins, Paul Connelly, Charles Wheeler and Jim Handley, 150; Robert Jewell, Gregg Quick and Dick Hauck, 150.5; R. P. Shapard, Walter Motter, John Kovacevich, Matt Kurtz, Rube Ball and Leonard Smith, 151; H. Baxter, 151.5; Lou Rogers, Charles New and Bill Cobble, 152; Henry Cobble and B. Roan, 152.5; Frank Ramsey, John Kilpatrick, Carl Eiser and Pete Morris, 153; Reid Murphy and Jim Tarwater, 153.5.

Prize-winning golfers among the hosts were: R. H. Howell, Jr., 139.5; Fred Johnson, 142.5; Decatur Cunningham, 143.5; Von Oehmig and Lit Spurlock, 145; Marshall Goree, 146; Henry Crumbliss, 147; Bud Johnson and Jop Rickman, 148; Dave Gott, 148.5; Pete Morrow, T. H. Crudup, Les Gill and Paul Hemmerich, 149; Bob Griffith and Hugh Morrow, 149.5; J. L. McInnis and Tom Smotherman, 150; Ed Norman and Donald Jonas, 150.5; R. T. Davis Jr., Ted Toole, Ben Jordan and Emil Davis, 151.

Guest skeet winners included Bob Fisher, 46; Leon

Paul Hemmerich, G. B. Smith, John Fenley, David Gott


Bill Cobble, Henry Cobble, Pete Morrow, Arthur Cobble

M. C. James, H. C. Durham, B. B. Akin, G. S. Bryan

Paul Conley, Marshall Goree, Gene Dye, Claude Joiner Jr.

R. W. Breidenbach, Carl Eiser, Ben Pons, Harold Kellett

Frank Carter, Charles Heath, John Land, Don McLellan

Young, 45; Fred Robinson, 42; J. B. Dennison, 41; Mark Hodges and Bill Forsten, 38; Ted Davis, 37; Layne Slaughter, 36; Alex Cole, 34; C. C. Bailey, 31; Ernie Forsten, 28; J. A. Connors, 27; Judd Brooker, 26; George Browning, 24; R. E. Davis Jr., 20; Roy Tarver, 17; and C. T. Finney, 7. Hosts who shouldered, shot and won were Bill Wood, 46; Clay Timanus and Bill Dodson, 41; Hubert Shuptrine and Bill Austin, 39; Pete Branton, 34; George Bailey and Frank Longcrier, 29; Bob McDonald, 25; Jack Stickley, 21; Flake Belk, 18; and Bruce Weber, 7.

Frank Carter of Textiles Inc. is president of the Chattanooga Yarn Association. Hubert O. Frye of Central Frank-

John Everett, H. W. Davenport, R. K. Howell Jr., T. C. Smotherman

Ben Jordan, Bob Davis, Bill Burnes, Felmont Eaves

Leonard Smith, Bob Fisher, A. B. Kizer, R. H. Griffith

J. T. Kilpatrick, J. T. Jones, P. E. Johnson, D. R. Jonas

Sam Hodges, Bill Bowman, G. S. Johnston, A. G. Myers Jr.

M. W. Morris, L. E. Rogers, D. E. Shea, Jim Davis

John Gay, George West, Ralph Ewing, Peyt Carter

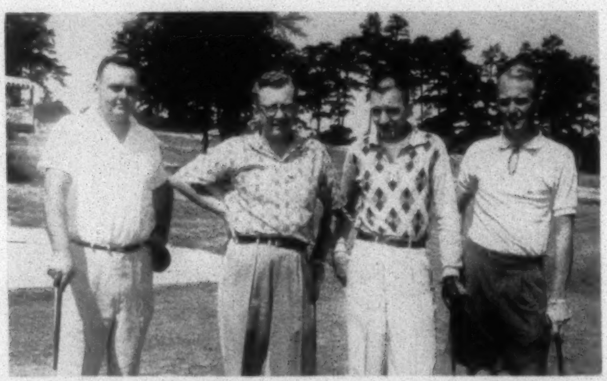
R. P. Shapard, Jim Dudley, Gordon Dudley, John Rickman

lin Process Co. is vice-president, Harvey W. Davenport of American & Efird Mills is secretary, and R. D. McDonald is treasurer. Committee chairmen for the outing included Pete Morrow, Dixie Mercerizing Co., prizes; Pete Branton, Comer-Avondale Mills, invitations; R. H. Griffith, golf; George Bailey, Comer-Avondale, skeet; Bob Mebane, American Enka Corp., floor show; R. K. Howell, American Thread Co., handicap; A. K. Johnson, Dixie Mercerizing, publicity; H. W. Davenport, American Enka, registration; and Bob Boyd, Leon Ferenbach Inc., hotel and reservations.

Door prizes were awarded to June Harrell, John Land, Ashley Jewell, Bill Cobble and P. L. Carter.

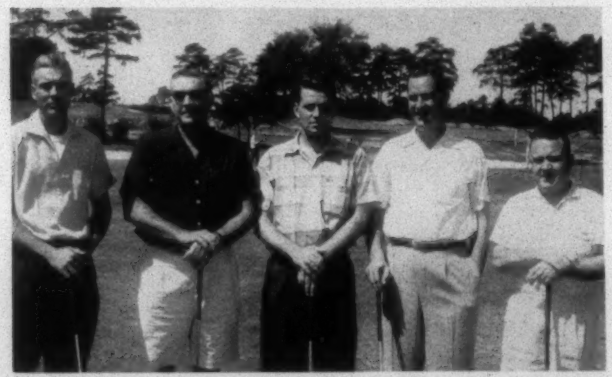
M. F. Simmons, Tony Mozur, Ed Rencher, Bob Taylor

Frank Deaver, Ted Toole, Garner Hallman, Frank Callaghan

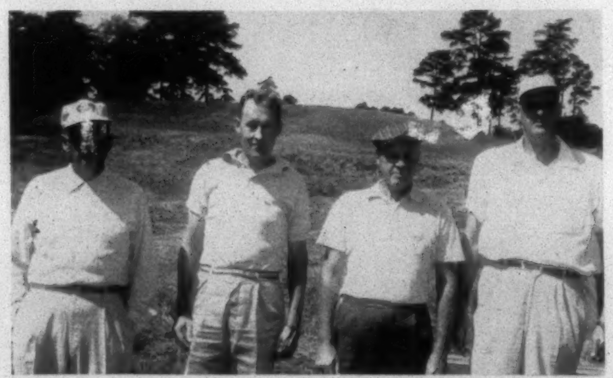


F. Ramsey, W. Reichenback, B. Kienel, D. Cunningham

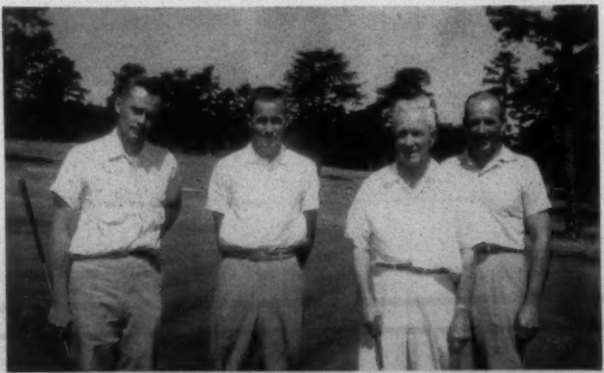
M. C. Slayton, J. F. Hanley, A. L. McCall, Charles New



A. Livingston, C. Jordan, L. Christian, W. Shepard, Bob Mebane



E. J. Moore, R. C. Thatcher Jr., J. W. Gilreath, E. H. Norman



H. L. Bacon, G. T. Stanley, Guy Dawson, H. S. Gordon

Roy Tarver, Bruce Weber, Hugh Morrow, Tom Wier

Woolen Overseers Association To Meet Nov. 3

The Southern Textile Overseers Association, formed at Greenville, S. C., during the week of the Southern Textile Exposition, will hold its first regular meeting Saturday evening, Nov. 3 at the Poinsett Hotel in Greenville, beginning at 7 p.m.

At the organizational meeting, membership requirements for the group were drawn up and officers were elected. Named as first president was George S. Pickett, superintendent of dyeing at Wyandotte Worsted Co., Conestee, S. C. Mr. Pickett, who is a past president of the National Association of Woolen and Worsted Overseers, led the organization movement. Other officers named were Charles Grubb, overseer of finishing, Wyandotte Worsted, vice-president; Lyman Frost, superintendent of Belton (S. C.) Bagging Co., secretary; Joseph R. Bowring, general supervisor, Abbott Worsted Co., Seneca, S. C., assistant secretary; B. William Wyskzka, general overseer, Abbott Worsted, treasurer; and Charles Haynes, Howard Bros. Mfg. Co., Gastonia, N. C., member of the executive committee.

According to Mr. Pickett, membership in the new group is open to those who have been an overseer, superintendent, designer or plant engineer for more than a year in any mill processing fibers under the woolen or worsted system or processing wool under other systems. Membership is also open to any person directly allied with the industry.

Some 25 persons attended the first meeting, and Mr. Pickett pointed out that the Southern Textile Association had started "even smaller." The S.T.A., organized in 1908, is composed of textile operating executives in the Carolinas and Virginia. Mr. Pickett said he plans to attend the Fall meeting of the South Carolina Division of the S.T.A. at Clemson, S. C., on the morning of Nov. 3, to meet officers and members of that group and observe how the meeting is conducted.

Piedmont A.A.T.C.C. Holds Fall Meeting

The Piedmont Section of the American Association of Textile Chemists & Colorists held its regular Fall meeting Oct. 6 at the Hotel Charlotte, Charlotte, N. C., with some 350 persons registered for the technical session included in the program.

Featured at this session were two papers on non-woven fabrics. The first of these was on "Technology of Non-Woven Fabrics," by L. P. Wenzell of the Celanese Corp. of America. The paper was presented by L. G. Lovin, also of Celanese, who predicted an ever increasing volume in the production of non-woven goods. He estimated 1955 production of such fabrics at 50 million pounds and forecast a 1960 production of 125 million pounds. Possible advantages of these goods in the apparel field, he said, include low cost, wrinkle resistance, washability and style appeal. The fabrics can be printed, embossed and dyed in the same manner as woven fabrics, he noted, and can be finished by the same processes as woven materials for mildew, water and fire resistance. A second paper presented by N. H. Sherwood of the B. F. Goodrich Chemical Co. discussed "Binders for Non-Woven Fabrics."

At a meeting of the research committee, plans were made to continue for another year the section's studies of the effect of resin finishing on the light fastness of vat dyes. The section's research paper on this subject won first prize in

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ECLIPSE BOBBIN HOLDERS

They produce better fabrics at less cost

Actually, of course, there are many reasons for the superiority of Eclipse Bobbin Holders. Easy installation, reduced maintenance requirements (resulting in substantial savings in labor costs), resistance to rust, durability (some holders in operation for more than ten years) and many, many more. Put them all together, though, and they add up to one basic fact: with Eclipse, you get *better fabrics at lower cost.* And what better reason could there be for the amazing sales increase Eclipse has enjoyed in the past year. The textile industry has discovered that the use of old-fashioned wooden skewers is inefficient and costly. The modern way to spin yarn is with Eclipse Bobbin Holders. Our increased plant capacity now assures you of prompt delivery. Write or call Eclipse Machine Division today.

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Bendix AVIATION CORPORATION

the annual research paper contest during the recent Perkin Centennial. Looking ahead to next year's contest, the committee selected four more subjects for research. The subjects selected and subcommittee chairmen are: (1) method for determining residual shrinkage in nylon tricot, J. G. Melton, J. P. Stevens & Co.; (2) thermal history of thermoplastics, Neal Truslow, U. S. Rubber Co.; (3) effect of detergent agents on vat dye pigments and fastness incidental to laundering, V. B. Wright, North Carolina Finishing Co.; and (4) application of radio chemical techniques to textile research and processing problems, Dr. A. T. Clifford, Riegel Research Laboratories. Dr. L. B. Arnold of Vikon Chemical Co. continues as chairman of the resin finish-vat dye subcommittee.

The meeting closed with the annual banquet Saturday night, at which Dr. Frank J. Soday, vice-president in charge of research and development for The Chemstrand Corp., spoke on "Developments of Science and Industry in the South." Dr. Soday cited the predicted increase in synthetic fiber production to four billion pounds by 1975 as one of many fields in which he said the South will advance industrially. He also predicted that the South will have a majority of the nation's chemical industry by 1975. Some 175 persons attended the banquet.

T.R.I. Announces Fall Seminar Schedule

Textile Research Institute, Princeton, N. J., has announced the following seminar schedule for Fall 1956: *Nov. 1*—Richard O. Steele, Rohm & Haas Co.—"Tear Strength of Fabrics." *Nov. 15*—John Menkart, T.R.I.—"The Significance of Crimp in Wool." *Nov. 29*—Prof. Frederick R. Eirich, Polytechnic Institute of Brooklyn—"Interactions of Polyvinyl Pyrrolidone with Dyestuffs." *Dec. 13*—William G. Klein, Fabric Research Laboratories—"Some Changes in Fabric Structure Under Biaxial Stresses." *Dec. 27*—Robert F. Schwenker Jr., T.R.I.—"Chemical Modification of Cellulose to Effect Flame and Glow Resistance." *Jan. 10*—Bengt Ranby, American Viscose Corp.—"Properties of Cellulose Chains of Different Origin." *Jan. 24*—Joseph B. Levy, T.R.I.—"Static Electrification of Filaments." All dates are Thursdays and the seminars are held at the T.R.I. laboratories beginning at 2:30 p.m. The seminars are completely informal and no written reports are prepared. Advance notice of planned attendance is requested.

Conference On Man-Made Fiber Progress

A comprehensive review of progress being made in the field of man-made fibers was presented during a one-day conference at the Barbizon-Plaza Hotel, New York, N. Y., Oct. 12, under the auspices of The New York Academy of Sciences.

This conference explored over-all aspects of polymer-fiber-fabrics-end use factors of importance for better understanding and utilization of the potential inherent in the rapidly growing man-made fiber industry.

Leading experts from major fiber producers reviewed advances in cellulosic, cellulose acetate, polyamide, polyester, acrylic and other vinyl fibers. These materials will be discussed in terms of composition, structure, manufacture and properties and their relationship to consumer requirements.

Representatives from academic, industrial and consumer organizations discussed the comparative evaluation of fiber characteristic advances in dyeing and finishing, new developments in stretch and bulk yarns, and the educational needs of the consumer.

Jack J. Press of the Polytechnic Institute of Brooklyn and the U. S. Navy Clothing Supply Office, was chairman of the conference. J. H. Dillon, director of the Textile Research Institute, Princeton, N. J., was chairman of the afternoon session.

Jules Labarthe, Mellon Institute of Industrial Research, Pittsburgh, Pa., concluded the sessions with a paper on "What the Textile Consumer Expects from Science."

National Power Show Next Month

New fields of industry will be uncovered at the 22nd National Exposition of Power and Mechanical Engineering, which will be held Nov. 26-30 at the New York Coliseum.

The exposition will again be under the auspices of the American Society of Mechanical Engineers and held in conjunction with the society's 76th annual meeting.

The power show will be a complete exposition. It will begin with the fuel source of power and carry through with displays portraying the entire sequence of fuel conversion into heat and power.

An over-all review of exhibits will disclose that a majority are related to the production and utilization of heat and power which are required for manufacturing operations of every kind. In its 34-year history the power show has earned recognition as the most authentic source of general information and mechanical engineering progress, and this year's display will continue the appeal to visitors from every avenue of industry.

Industrial plant design, including power plants, consists largely of the application of specialized units in a sequence of contributing assemblies. A quick run-down of some of the new products which will be seen at the exposition illustrates the wide scope.

The exposition will be open to visitors by invitation and registration, but closed to the general public. The management will be under the International Exposition Co. with permanent headquarters at 480 Lexington Avenue, New York 17, N. Y. E. K. Stevens, president of the company, is manager of the exposition.

Technical Papers Heard At T.Q.C.A. Meet

Some 100 mill men from the two Carolinas attended the Fall meeting of the Textile Quality Control Association held Sept. 27-28 at the Sedgefield Inn, Greensboro, N. C. Ashley B. Roberts of China Grove (N. C.) Cotton Mills Co., T.Q.C.A. president, presided at the meeting, and Samuel B. King, Limestone Mfg. Co., Gaffney, S. C., served as program chairman.

The first session of the meeting, presided over by Kelly Waits, Joanna (S. C.) Cotton Mills Co., heard Dr. A.N.J. Heyn, professor of natural and synthetic fibers at Clemson College, discuss "Causes and Detection of Damage in Raw Cotton." Dr. Heyn told the group that early recognition of damaged fiber and the identification of the type of damage are of great importance in cotton buying and quality testing.

A. C. Flint, vice-president of Livingston & Haven Inc., speaking on "Improved Picker Lap Quality with the Long Pneumatic Lap Control System," pointed out that a good quality control program begins with a good picker lap. Charles F. Strandberg, president of Strandberg Engineering Laboratories, described improved weight control through use of the moisture monitor, a resistance measuring device.

In a paper on "Causes and Practical Control of Size Variations," James M. Heavner, quality control supervisor of Gastonia (N. C.) Combed Yarn Corp., told how his firm had determined that doublings will not take care of size variation. "We believe," he said, "that it is not the number of doublings which will bring relief, but what we double." Showing a chart on lap tolerance improvement, he remarked, "We noticed a major improvement after line supervision adopted a more positive policy to keep all laps in this tolerance."

The closing session heard Joe L. Delany, general superintendent of Joanna (S. C.) Cotton Mills Co. speak on "Effect of Heat and Ginning Operations on Spinning and Weaving." Hans Locher of Uster Corp. described analysis of yarn regularity using the Uster Spectrograph. August Descheemaeker of the Dacron research laboratory of the Du Pont Co., spoke on "The Blend of 65 Per Cent Dacron Polyester Fiber and 35 Per Cent Cotton," which he described as the ratio which best combines the desirable properties of the two. W. H. Esslinger, quality control co-ordinator, Orr Mills, Anderson, S. C., presided over the final session.

Textile Session, M & E Conference

Smaller meeting groups to permit more intimate discussion of factory problems are planned for the eighth National Plant Maintenance & Engineering Conference to be held at the Public Auditorium, Cleveland, Ohio, in January. The conference, the largest industrial gathering of its kind in the country, attracts over 2,500 engineers each year and is expected to set a record attendance this January. Consequently, it was decided to run ten conference sessions simultaneously so that the audience for each will be smaller.

As is customary, the conference will be held at the same time and place as the annual Plant Maintenance & Engineering Show. The conference will be held for three days, Jan. 28 to 30, inclusive, while the show will run for four days through the 31st.

The show also will be of record proportions this year with more than 400 companies exhibiting and the exhibit area topping the 100,000-square-foot mark for the first time. The show is now among the three largest annual industrial expositions in the country.

Theme for the show and conference for 1957 is "Good Maintenance or Bad—The Difference is Profit." Clapp & Poliak Inc., New York, manages both events. Only one general session which all will attend will be held. It will consider "The Changing Requirements for Maintenance," and will take place on the morning of the first day.

One session will be devoted to maintenance problems of the textile industry. Maintenance welding has been added as a new topic this year. Other sessions will cover preventive maintenance, maintenance cost controls, maintenance shops, maintaining materials handling equipment, painting, equipment replacement policies, labor relations, maintenance of equipment standards, maintaining electrical distri-

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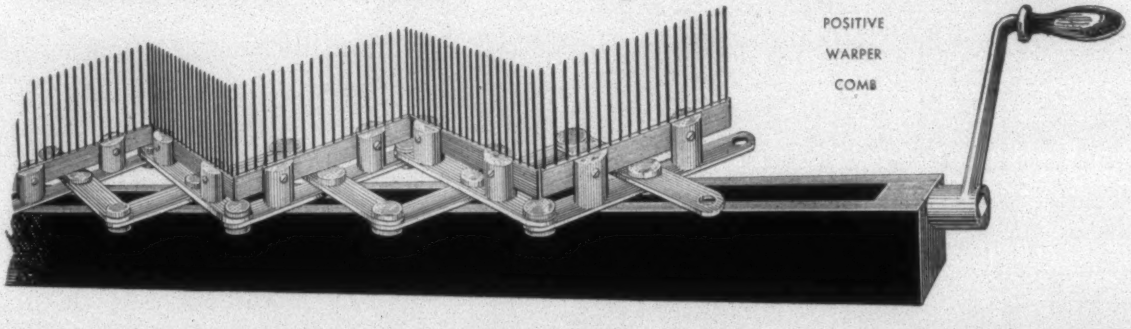

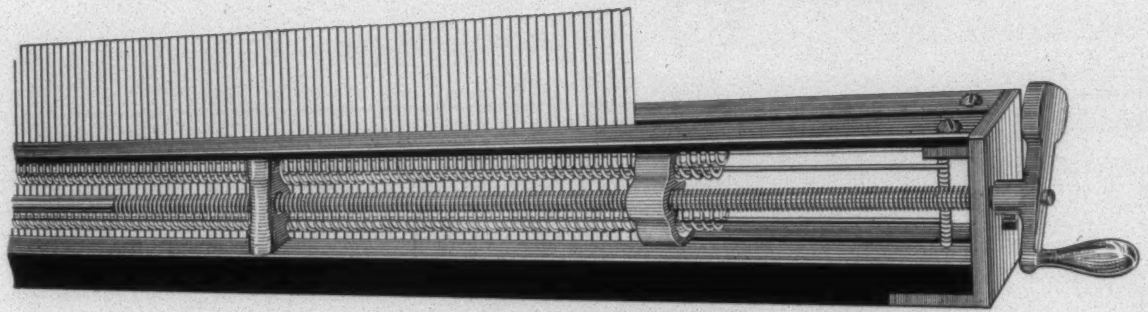

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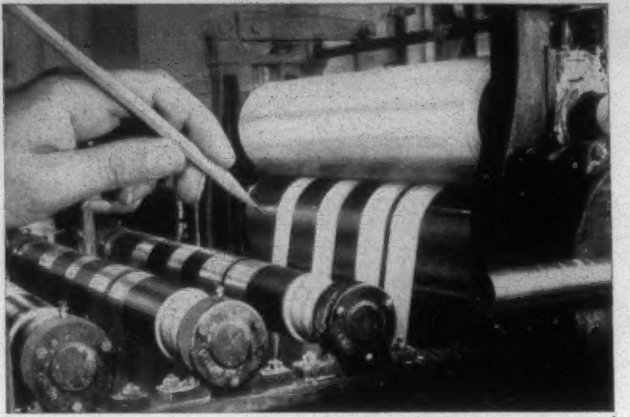

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All sessions, except the opening one and those devoted to single industries, will be repeated to permit visitors to choose the date of attendance, or attend different meetings.

Advance registration cards and hotel information may be obtained from Clapp & Poliak Inc., 341 Madison Avenue, New York 17, N. Y.

Georgia Education Foundation Elects Whorton

The Textile Education Foundation Inc. held its 15th annual meeting on the Georgia Tech campus Oct. 20 and elected as its new president, B. W. Whorton, president of Dixie Mills, LaGrange.

The foundation, established by Georgia's textile industry during World War II, regularly supplements state funds allocated the A. French Textile School at Tech. All of the foundation's income and efforts are directed toward the school.

Foundation officials and members heard the organization's operations during the past year outlined at the meeting in a series of reports. Reports also were made by members of the A. French Textile School.

John P. Baum, vice-president of J. P. Stevens & Co. of Milledgeville, was elected vice-president of the foundation. Henry W. Swift, president of Swift Spinning Mills of Columbus, was named treasurer, and T. M. Forbes, executive vice-president of the Cotton Manufacturers Association of Georgia, was re-elected secretary.

A. B. Edge Jr., president of Callaway Mills of LaGrange, the foundation retiring president, was named chairman of the executive committee. Serving with Mr. Edge on this committee will be Mr. Whorton, Mr. Baum, Hansford Sams Jr., assistant to the president, Scottdale Mills of Scottdale, and William D. Swift, vice-president, Muscogee Mfg. Co. of Columbus.

New directors are C. N. Neuner, manager, Aldora Mills of Barnesville; William D. Swift of Muscogee Mfg. Co., Columbus; L. L. Jones Jr., president, Canton Cotton Mills, Canton; Mr. Whorton; and J. M. Cheatham, president, Dundee Mills Inc. of Griffin.

Henry McD. Tichenor, president, Walton Cotton Mill Co., Monroe, was named chairman of the investment committee. Serving with Mr. Tichenor will be Mr. Whorton, William D. Ellis, president, Southern Mills, Atlanta; Clarence E. Elsas, president, Fulton Bag & Cotton Mills, Atlanta; and Henry W. Swift of Swift Spinning Mills, Columbus.

Q.M. Offers Courtesy Fabric Shade Tests

The Quartermaster General has authorized courtesy tests, for shade only, for textile manufacturers producing fabric for the Army Green and the Army Blue uniforms to be sold through commercial civilian outlets. This authority provides textile manufacturers with a facility not previously available, where the manufacturer may assure himself that the material being produced is of a shade compatible with the standard and within the tolerances allowed.

This procedure is another step in the development of a program to improve the appearance of the Army, and will result in the individual serviceman being able to procure uniforms from commercial sources with confidence that they are of the standard shade. After sufficient time has elapsed for textile manufacturers to begin having shades checked, service personnel will be informed of this procedure so that they may require evidence from the vendor indicating that the fabric of which the uniform is made has been approved for shade by the Quartermaster Testing Laboratory.

The fabrics that may be forwarded for courtesy test for shade evaluation are limited to the following when produced by blending the proper shades of stocks or top dyed wools: Cloth, Wool, Serge, Shade 44; Cloth, Wool, Elastique, Shade 44; Cloth, Wool, Barathea, Shades 150 and 151; Cloth, Wool, Elastique, Shades 150 and 151; Cloth, Wool, Broadcloth, Shades 150 and 151.

These fabrics were selected because of the anticipated procurement by officers and warrant officers of the new Army Green and the Army Blue uniforms prior to their becoming mandatory for the 1957-58 Winter season.

In order to prevent overtaxing the testing facilities, courtesy tests will be performed only when submitted by the textile manufacturer. Submission of samples for shade test by the uniform manufacturers, converters, retailers, or by brokers is not authorized. After the program becomes effective, the impetus will be on the uniform manufacturer to assure that fabric supplied by his textile source has been evaluated for proper shade.

Textile manufacturers are encouraged to submit sample swatches of each roll of a listed fabric to General Testing Laboratory, Quartermaster Inspection Service Command, 2800 South 20th Street, Philadelphia 45, Pa. Eight by five-inch size swatches are required. The manufacturer will be notified of the result of the test directly by the testing laboratory. Samples submitted for courtesy testing are to be accompanied by a letter stating that the material was produced by the textile manufacturer presenting the sample and advising of the total yardage represented by the sample.

Puerto Rican Textile Industry Growing Fast

The Puerto Rican textile industry is growing fast and its potential appears to be tremendous, according to Walter J. Koechlein, vice-president of Commercial Factors Corp. Mr. Koechlein, who recently returned from an extended tour of Puerto Rico, reports that the commonwealth generally is on the move and looking to the future. "New building and improvements of all kinds are going on at an accelerated rate," he said. "In fact, you can almost hear the place growing." Textiles, he said, are a leading export. While on the island, Mr. Koechlein visited not only the clients of his own firm, but talked with leaders in many fields, and made a careful study of over-all conditions.

Petticoat Invasion Of Textile Chemistry

An encouraging word from Clemson College and the textile industry has ushered in a new college-trained career for women in South Carolina.

Three ladies from Westminster, S. C.,—Patricia Singleton, Sarah Taylor Spearman and Barbara Witherspoon—have enrolled there in textile chemistry. It was the first acceptance of co-educational students in Clemson's School

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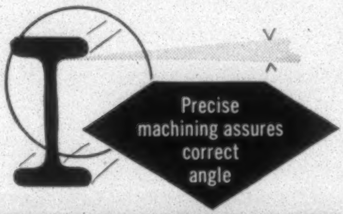

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of Textiles. One registered originally last year but pursued another curriculum.

Two of the "pioneer" enrollments evolved from textile family backgrounds; the third, from a decided interest in chemistry. Mrs. Spearman, whose husband, Clayton, is a Clemson textile student, received the hearty endorsement of her father, George M. Taylor. Mr. Taylor, superintendent of Oconee Mills in Westminster, "conceded" that there was definitely a place in the textile industry for women chemists. Miss Singleton was given a similar boost by her father, J. P. Singleton, who is a yard overseer at Oconee Mills. Miss Witherspoon visited Clemson this Summer with an "open mind." After talks with Prof. Joseph Lindsay, head of the department of chemicals and dyeing, she chose textile chemistry on its "challenging" merit.

Miss Witherspoon, a junior at Westminster high school last year, with all the necessary courses already passed for graduation, will receive her prep diploma at the end of her freshman year in college. Mrs. Spearman and Miss Singleton graduated from Westminster last Spring. All three completed strong college preparatory work in chemistry and biology. Professor Lindsay is enthusiastic about their decisions, and their aptitudes for the training ahead. "There are not many women textile chemists, and nearly all of these are in the North," says Professor Lindsay.

Rayon, Acetate Shipments Slough Off

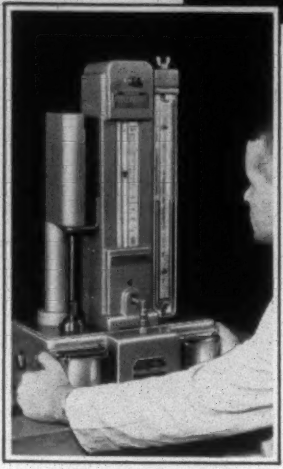
United States producers of rayon and acetate yarn, staple and tow shipped a total of 86,600,000 pounds in September, a decline of three per cent from the August figure of 89,100,000 pounds and 15 per cent below the 101,500,000 pounds shipped in September 1955, according to the *Textile Organon,* statistical bulletin of the Textile Economics Bureau Inc. September shipments this year comprised 85,400,000 pounds to the domestic market and the balance of 1,200,000 for export.

High-tenacity rayon yarn shipments in September were 29,100,000 pounds, a figure two per cent above August shipments of 28,500,000 pounds but 24 per cent below the 38,200,000 pounds shipped in September a year ago. Regular+intermediate tenacity rayon yarn shipments amounted to 14,000,000 pounds, or about equal to the August figure, but were 15½ per cent below the 16,600,000 pounds shipped in September 1955. For acetate filament yarn, September shipments of 13,500,000 pounds were 7½ per cent below the August level of 14,600,000 pounds and 18 per cent below September 1955 shipments of 16,500,000 pounds.

Rayon staple+tow shipments in September were 26,700,000 pounds, two per cent below the August figure of 27,200,000 pounds, but showed little change from the September 1955 level. Acetate staple+tow shipments declined by 1,600,000 pounds or 32½ per cent to the September level of 3,300,000 pounds; September shipments, however, were about equal to those of a year ago.

While total shipments declined by 2,500,000 pounds from August to September, the industry's production of all types of rayon and acetate was lower by 4,900,000. Producer's stocks on September 30 amounted to 115,900,000 pounds, a decline of 4,900,000 pounds or four per cent from the August ending stock.

According to the *Organon* tabulation of man-made staple



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imports, a total of 5,886,000 pounds of rayon staple were imported during August and 6,632,000 pounds were brought in during July. For the first eight months of this year, rayon staple imports have aggregated 62,912,000 pounds, a figure 51 per cent below the 128,336,000 pounds imported during the comparable 1955 period. For the non-cellulosic man-made fibers, August imports were 21,000 pounds, thus bringing the eight-month 1956 total to 225,000 pounds, which compares with 185,000 pounds in the same period a year ago.

The *Organon's* annual review of the world cotton situation points out that global cotton production during the crop year ended July 1956 aggregated 37,700,000 bales, an increase of 700,000 bales over the previous season and the highest output ever recorded.

With a large carryover of 21,900,000 bales from the previous year, the total available world supply amounted to 59,600,000 bales; 2,600,000 bales more than were available at the end of the 1955 season. Production again exceeded consumption so that the total carryover rose to 23,700,000 bales, the largest since the 1945 season when the carryover was 26,600,000 bales.

Regarding international trade in raw cotton, the *Organon* points out that a total of 12,300,000 bales were exported from the major producing countries, a figure slightly higher than the 1955 seasonal total of 12,200,000 bales. Total exports from all foreign countries reached a new level of 10,100,000 bales in the season just ended; a figure 16 per cent greater than the 8,700,000 bales exported in the 1955 season. United States exports of American cotton, on the other hand, declined by 1,300,000 bales to a total of 2,200,000 bales; in the last ten years, only the 1948 season exports of 2,000,000 bales were lower.

In discussing cotton production, the *Organon* points out that it is important to keep in mind the large and expanding world production of man-made fibers. During the calendar year 1955, world output of these fibers aggregated 5,579,000 pounds or the equivalent of about 11,000,000 bales of cotton. While not all of the man-made fiber output is directly competitive with cotton, by far the largest part of it was employed in end-uses which, in the absence of man-made fibers, probably would have utilized mainly cotton.

The position of the United States as the world's leading producer of cotton, the *Organon* stated, is borne out by the fact that 39 per cent of all the commercial cotton produced in the world during the 1956 crop year was grown in this country. This share probably would have been larger were it not for the acreage restrictions that have been put into effect. On the other hand, there has been a large increase in foreign cotton output since World War II. In the latest season, there were five nations (excluding the Iron Curtain countries) whose commercial cotton output exceeded 1,000,000 bales. These included Mexico, whose 2,240,000-bale yield was the largest in that country's history, and India which produced 3,800,000 bales. The others were Egypt with 1,541,000 bales (off four per cent), Brazil with 1,600,000 bales (off two per cent) and Pakistan which produced 1,370,000 bales (a 4½ per cent decrease).

The *Organon* states that world cotton consumption in the 1956 crop year was 35,100,000 bales, a new record and a

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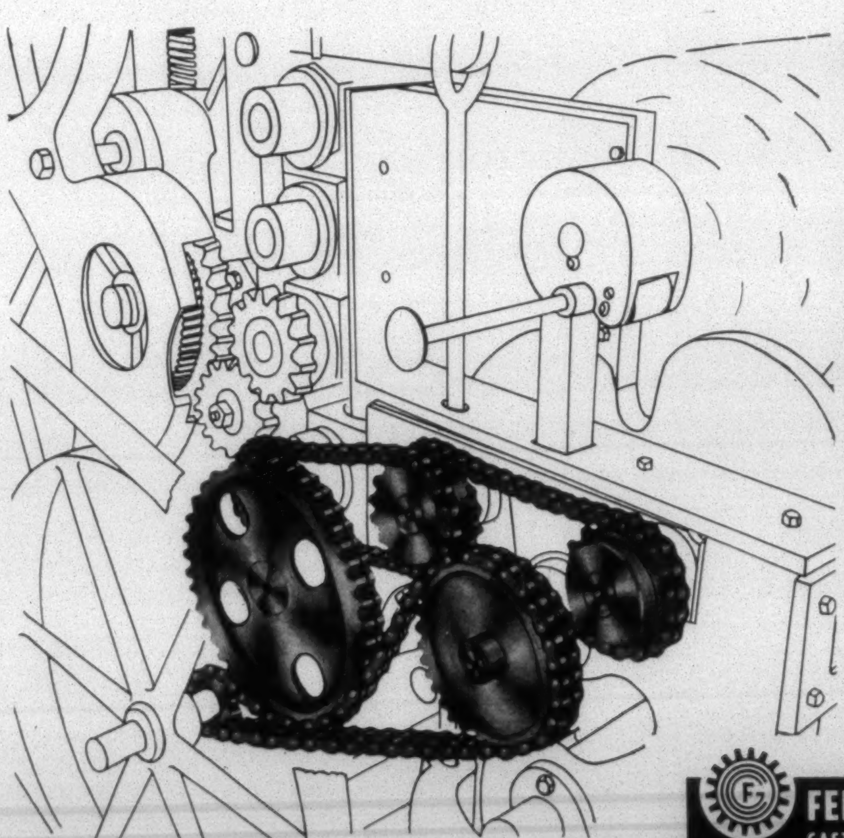

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gain of 100,000 bales over 1955, the previous high season. United States consumption was up 4½ per cent over the previous year, but foreign use declined one per cent. Cotton consumption in the United States at 9,200,000 bales was comparable with the 9,250,000-bale average of the 1945-1954 period. For foreign nations, the trend in cotton consumption has shown marked increases since the low wartime average of 15,500,000 bales per season.

In a summary of Commodity Credit Corp. gains and losses on textile and related operations, the *Organon* points out that, since the inception of the C.C.C. and predecessor programs in October 1933, a net loss of $82,412,000 has been incurred. Raw cotton operations showed a net gain of $165,747,000 over the 23-year period, effected mainly through the large profit realized on American upland cotton during the World War II period. Over the 23-year span, the wool price support program resulted in a loss of $100,708,000, flax and hemp programs produced a loss of $21,856,000 and the programs on cottonseed and products (mainly cotton linters) were operated at a loss of $125,595,000.

Gain In Men's Wear Worsteds Is Cited

A definite trend to fabrics of worsted construction in men's and boys' wear has occurred during the first half of 1956, the Wool Bureau has noted in a report on shifts in weights and constructions of woven wool fabrics.

The bureau's report, which compares the first six months of 1956 with the corresponding period in 1955, also found that fabrics in the nine to 13-ounce weight range generally represented a smaller share of both woolens and worsteds in men's and boys' wear and of worsteds in women's and children's wear. Only in the category of women's and children's wear woolens did the importance of this weight range increase.

While the total output of wool fabrics for the men's and boys' wear trades increased 12 per cent, the output of worsteds rose 22 per cent, or at more than seven times the rate of gain for woolens (three per cent). Worsteds now account for 50 per cent of total men's wear fabric output, the bureau stressed, as compared with 46 per cent a year ago. At their peak of importance in 1950, worsteds accounted for 68 per cent of total output.

All weights of worsted constructions except those weighing 16-20 ounces contributed to the increasing importance of worsteds. Here, thanks to the eight per cent gain in the production of men's overcoats and topcoats and the broader use of heavy woolens in sportswear, the importance of wool increased sharply—winning 82 per cent of the total 16 to 20-ounce wool fabric market, as against 69 per cent last year.

The major movement out of the nine to 13-ounce range—which represented 64 per cent of total men's and boys' wear fabric output in the first half of 1955 and only 52 per cent in 1956—was offset by gains in the shares represented by fabrics weighing less than nine ounces, those weighing 13 to 16 ounces, 16 to 20 ounces, and heavier weights. In woolen constructions, the shift out of nine to 13-ounce weights benefitted the heavier weights somewhat more than fabrics weighing 13 to 16 ounces.

In women's and children's wear fabrics, worsteds' share of total output rose from ten per cent in the first half of 1955 to 12 per cent this year—an increase largely attributable to the significant rise in the share of total worsted output represented by fabrics in the 13 to 16-ounce range. From two per cent last year, their share of total worsteds rose to ten per cent in 1956.

In addition, worsteds rose from 18 to 24 per cent of total output of fabrics weighing less than nine ounces, and from three per cent to five per cent of fabrics weighing 16 ounces and over. A slight reduction was noted in their share of total output of 9 to 13-ounce fabrics.

The total production of women's and children's wear fabrics for the first half of 1956 was 14 per cent higher than the like 1955 period—reflecting a 36 per cent rise in the production of worsteds and an 11 per cent increase in the output of woolens.

Among the shifts accompanying the decline in the relative importance of nine to 13-ounce worsteds was an increase of two percentage points in the share held by worsteds weighing under nine ounces. This group now has 22 per cent of total worsted output—a steady improvement over the low of 13 per cent recorded in 1951.

Apparel Wool Consumption Shows Gain

Seven-month totals of apparel wool consumption continue to show significant gains over a year ago, the Wool Bureau reports in a review of the U. S. wool situation. At the same time, the bureau asserted, low trade stocks and preliminary reports of third quarter orders for apparel fabrics suggest an acceleration in wool textile business during the remainder of the year.

The gain of nine per cent in mill use of wool during the January through July period reflected a four per cent rise in the woolen system and a 15 per cent rise in the worsted system over the corresponding 1955 period.

Increased mill consumption of wool was accompanied during the first half of 1956 by a nine per cent rise in the production of wool textiles over the corresponding period of 1955, with the output of men's and boys' wear fabrics up 12 per cent, and women's and children's fabrics up 14 per cent.

Preliminary new orders received by wool textile mills for part of the third quarter suggest an acceleration of wool textile business, especially in women's wear fabrics, which would serve to keep the outlook for 1956 favorable in comparison with 1955, the bureau asserted.

In all, the wool textile industry has fared better so far this year than either cotton or the synthetic fibers, the bureau declared, citing civilian per capita fiber consumption figures for the first half of 1956 and the mill holidays called by weavers of synthetic fibers to cut inventories and strengthen price structures.

Per capita wool use during the first half this year was 10½ per cent higher than the six-months rate for 1955, while per capital cotton use was up only 2½ per cent and the per capita use of synthetic fibers was down 11½ per cent, according to estimates of the Textile Economics Bureau.

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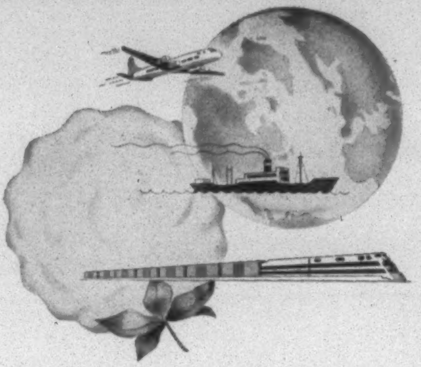

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Wool Consumption And Stocks—August 1956

The August rate of fiber consumption on the woolen and worsted systems was 25 per cent above the July rate and six per cent above that of August 1955, according to the Bureau of the Census. The weekly average raw wool consumption during August was 9,143 thousand pounds (scoured basis), or 27 per cent above the July level, and nine per cent above that of August 1955. The rate of consumption of carpet class wool increased 70 per cent compared to the previous month and 15 per cent compared to August 1955, while consumption of apparel class wool was 15 per cent above the July level and five per cent above that of August of last year. Consumption of fibers other than raw wool averaged 6,052 thousand pounds per week, or 22 per cent above the July average and three per cent above the rate for August of last year .

Cotton Broad Woven Goods—Second Quarter

Cotton broad woven fabric production in the second quarter of 1956 was five per cent below the first quarter 1956 output, but six per cent higher than the second quarter 1955 level, according to figures released by the Bureau of the Census. Production declines ranging from two to 11 per cent were reported for all fabric groups, with other woven cotton fabrics and specialties showing a decrease of 11 per cent compared to the previous quarter. The output of duck and allied fabrics decreased ten per cent, while the output of toweling, dishcloths and fine cotton fabrics, decreased seven per cent compared to the previous quarter. Colored yarn fabrics decreased six per cent, print cloth yarn fabrics decreased four per cent, napped fabrics, blankets and blanketing decreased three per cent, and sheeting and allied coarse and medium yarn fabrics decreased two per cent compared to the first quarter 1956.

Finished Broad Woven Goods—1955

A total of 10,450 million linear yards of cotton, silk and man-made fiber fabrics was finished during 1955, according to the Bureau of the Census, Department of Commerce. This was almost nine per cent above the 1954 figure. Cotton fabrics finished in 1955 amounted to 8,098 million linear yards, or nine per cent greater than the amount finished in 1954. The 2,351 million linear yards of silk and man-made fiber goods finished was eight per cent higher than last year's total.

In the finishing of cotton goods, South Carolina ranked first with 29 per cent of the total. North Carolina and Massachusetts followed with 15 per cent and 14 per cent, respectively. New Jersey accounted for over 39 per cent of the silk and man-made fiber goods finished, with Massachusetts and New York accounting for approximately 15 per cent each.

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